# ESSAI DE FOURNAISE-CCRL

Rapport final

Dossier CRIQ no 524-0224

Rapport technique no FAB-85-099

Novembre 1985

FC-5441

Client: APPROVISIONNEMENTS ET SERVICES CANADA

11, rue Laurier
Hull, (Québec)
K1A 0S5

No dossier MAS: OSQ.23440-4-9282
No de série: OSQ84-00412

RESPONSABLE DU PROJET:

PAUL A. LARUE, ing.
Énergie
Techniques de la fabrication

A aussi participé à ce projet: Pierre Renaud, ing.

Sainte-Foy, le 12 novembre 1985

C.G.:
D.S.:

177 pp

CRIQ
CENTRE DE RECHERCHE
INDUSTRIELLE DU QUÉBEC

MICROMEDIA
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## TABLE DES MATIÈRES


page

1.0 INTRODUCTION..... 1

2.0 PROCÉDURE D'ESSAI..... 1

3.0 DESCRIPTION DU MONTAGE..... 2

3.1 Calorifères 2
3.2 Instrumentation..... 2

4.0 MÉTHODE D'ESSAI..... 3

4.1 Montage expérimental..... 3
4.2 Charge de bois..... 4
4.3 Charge de conditionnement..... 4
4.4 Différences de B-415..... 5
4.5 Méthode de commande de l'appareil..... 5

5.0 MÉTHODE D'ANALYSE DES RÉSULTATS..... 6

5.1 Résultats à la cheminée..... 6
5.2 Résultats au plenum..... 6

6.0 RÉSULTATS..... 6

7.0 DISCUSSION DES RÉSULTATS..... 28

7.1 Fréquence d'échantillonnage..... 28
7.2 Rendement et émission..... 30

8.0 CONCLUSION..... 30

9.0 SUGGESTED MODIFICATIONS TO DRAFT STANDARD B-415 (VERSION SEPTEMBER 1985)..... 30


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## TABLE DES MATIÈRES (suite)

page

ANNEXE I: Photos

ANNEXE II: Fréquence d'échantillonnage

ANNEXE III: Résultats détaillés - Série no 2 -

ANNEXE IV: Résultats détaillés - Série no 3 -

TABLEAU 1: Identification des essais - Série no 2

TABLEAU 2: Identification des essais - Série no 3

TABLEAU 3: Résultats - Série no 2 -

TABLEAU 4: Résultats - Série no 3 -

TABLEAU 5: Fréquence d'échantillonnage

FIGURES 1 à 8: Résultats Série no 2

FIGURES 9 à 16: Résultats Série no 3

CRIQ CENTRE DE RECHERCHE INDUSTRIELLE DU QUÉBEC

## 1.0 INTRODUCTION

Ce projet a pour but de proposer une méthode d'essai pour les calorifères à bois en se basant sur la norme CSA-B-415 qui est actuellement en préparation. Ce travail comprend deux phases:

A) Faire une série d'essais d'un calorifère combiné bois/huile et élaborer une proposition de méthode d'essai.

B) Appliquer la méthode d'essai proposée en A) au calorifère combiné bois/huile ainsi qu'à un autre calorifère à bois seulement.

Un rapport préliminaire a été publié en juillet 85 à la fin de la phase A (Rapport CRIQ no FAB-85-068).

Ce rapport-ci donne les résultats de la phase B) du projet ainsi que les modifications à effectuer à la norme CSA-B-415 pour l'appliquer aux calorifères à bois.

## 2.0 PROCÉDURE D'ESSAI

Suite aux recommandations contenues dans le rapport préliminaire (FAB-85-068), on a effectué les essais suivants sur les deux calorifères:

- Essai à puissance maximum.
- Essai à puissance minimum.
- Essai à deux puissances intermédiaires constantes.

Chaque essai sur chacun des calorifères a été répété au moins une fois.

## 3.0 DESCRIPTION DU MONTAGE

### 3.1 Calorifères

On a utilisé pour ces essais deux calorifères de marque Newmac: un combiné bois/huile modèle CL-96C, utilisé pour la phase A) (Série no 1) et la première partie de la phase B) (Série no 2), l'autre calorifère est un modèle WB-100E utilisé pour la deuxième partie de la phase B) (Série no 3).

Les deux calorifères ont été installés en conformité avec la norme CSA-B-415 et CSA-B-140.4 "Fournaises à air chaud alimentées à l'huile". Dans les deux cas, la gaine d'air chaud a une section de 9" x 20", tandis que celle d'air froid a été remplacée par un tunnel permettant la mesure du débit d'air (voir section Instrumentation).

Pour tous les essais au bois du calorifère bois/huile, on a enlevé le brûleur à l'huile et bouché son orifice. Ceci a été fait dans le but de réduire le poids suspendu à la cellule de charge.

### 3.2 Instrumentation

Les appareils de mesure utilisés étaient:

Oxygène:

Oxygen Analyser
Beckman Modèle 755
Gamme 0-25%

Gaz carbonique:

Infrared Analyser
Beckman Modèle 864-23
Gamme 0-20%

Monoxyde de carbone

Infrared Analyser
Beckman Modèle 864-12
Gamme 0-5%

Poids

- Cellule de charge: Interface Modèle 1 100 Ultra précision Gamme 1 000 lb
- Amplificateur: Viatran Modèle 1 110
- Sensibilité globale: 10 mv/kg

Pression de vitesse:

Micromanomètre Furness
Modèle MDC-FC-002

Humidité du bois:

Delmhorst Modèle RC-1C

Débit d'air:

Mesuré en faisant une traverse de Pitot dans une conduite de 32,5 cm de diamètre conforme à la norme ASHRAE 51-75.

Système d'acquisition de données:

Hewlett-Packard Modèle 3497 A.

Contrôleur:

Micro-ordinateur Hewlett-Packard HP-85 B.

## 4.0 MÉTHODE D'ESSAI

### 4.1 Montage expérimental

Le montage expérimental est en tout point conforme aux exigences de la norme B-415, sauf pour la position de la mesure de température de cheminées qui est faite à 18 pouces de l'axe du carneau conformément à la norme B-140. Les mesures de température d'air sont elles aussi faites conformément à B-140. Des photos des montages sont données à l'annexe I.

## 4.2 Charge de bois

Les dimensions intérieures des fournaises sont:

| | CL-96 | WB-100E |
|---|---|---|
| Largeur: | 33 cm | 34 cm |
| Hauteur: | 57 cm | 61 cm |
| Profondeur: | 61 cm | 53 cm |

Les charges de "Sapin Douglas" étaient donc constituées de:

| | CL-96 | WB-100E |
|---|---|---|
| Largeur: | 1 x 3,8 cm<br>2 x 9,0 cm | 1 x 3,8 cm<br>2 x 9,0 cm |
| Hauteur: | 1 x 9,0 cm<br>2 x 12,8 cm | 1 x 9,0 cm<br>2,x 12,8 cm |
| Longueur: | 50 cm | 44 cm |

Une photo d'une charge est incluse à l'annexe I.

## 4.3 Charge de conditionnement

Lors de départ à froid, une charge de conditionnement de 80% de la charge d'essai était brûlée dans les mêmes conditions que l'essai subséquent; on débutait l'essai lorsqu'il ne restait que 8 à 10% de la charge nominale à brûler.

Lors d'essais successifs à différentes puissances, on brûlait une charge de 40% de la charge nominale dans les mêmes conditons que précédemment.

Tous les essais, y compris ceux à puissance constante, ont été commencés par une période de 5 minutes à pleine puissance.

## 4.4 Différences de B-415

Toutes les mesures ont été faites en conformité avec la norme B-415; on y a toutefois ajouté les paramètres suivants:

- la température au plenum d'entrée;
- la température au plenum de sortie;
- le débit d'air chauffé par le calorifère.

Dans la norme B-415, on spécifie de prendre des lectures à tous les 5% de charge brûlée; dans notre première série d'essais (rapport préliminaire), on a augmenté cette fréquence au 2½% de charge brûlée plus une lecture à chaque fois qu'intervient un changement d'état de la commande de puissance de l'appareil. Pour ce rapport, on a encore augmenté cette fréquence à une lecture au 15 secondes (sauf pour les essais à puissance minimum où on a utilisé 37,5 secondes) plus une lecture au changement d'état (ON/OFF) du ventilateur d'air de combustion. Toutes ces lectures sont stockées sur ruban magnétique et de cette façon, à l'analyse, on peut choisir la fréquence d'échantillonnage requise. On a procédé ainsi de façon à pouvoir évaluer l'effet de la fréquence d'échantillonnage sur le résultat final.

## 4.5 Méthode de commande de l'appareil

Contrairement à la première série d'essais, tous les essais rapportés ici ont été faits avec le ventilateur du calorifère en mode automatique: ON-130°F, OFF-100°F. On doit toutefois noter qu'avec ces ajustements, le ventilateur reste constamment en marche, sauf parfois pour une courte période de temps au début des essais à puissance minimum.

Outre les essais à puissances maximum et minimum, les autres essais ont été effectués à puissance constante tel que recommandé dans le rapport intérimaire.

Pour ces essais, à chaque lecture, l'ordinateur calcule la puissance moyenne au plenum depuis le début de l'essai. Cette valeur sert de signal pour commander le départ ou l'arrêt du ventilateur de com-

bustion de façon à maintenir la puissance constante égale à la valeur de consigne sélectionnée. Pour rencontrer les exigences de B-415, on choisit deux puissances intermédiaires également espacées entre les puissances minimum et maximum de l'appareil.

## 5.0 MÉTHODE D'ANALYSE DES RÉSULTATS

### 5.1 Résultats à la cheminée

Tous les résultats ont été obtenus en utilisant la méthode de calcul contenue dans la version révisée en septembre 85 de la norme B-415. On présente les résultats standard (charge brûlée à 100%) ainsi que ceux obtenus en arrêtant l'analyse à 90% de la charge brûlée. On présente aussi les mêmes résultats obtenus en éliminant des calculs les hydrocarbures négatifs.

### 5.2 Résultats au plenum

On présente aussi les résultats au plenum pour deux fractions de chargement brûlé: soit le point à 90% comme ci-haut ainsi que le dernier point de lecture disponible, soit environ 97,5% de charge brûlée (base humide).

## 6.0 RÉSULTATS

Tous les résultats sont donnés sous forme de tableaux aux annexes II, III et IV.

Annexe II - Fréquence d'échantillonnage - Série no 2.

Annexe III - Résultats détaillés - Série no 2.

Annexe IV - Résultats détaillés - Série no 3.

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Pour chacun des essais, on retrouve dans ces annexes:

- Tableau des mesures.
- Tableau des résultats ($HC<0$ conservé).
- Sommaire des résultats ($HC<0$ conservé).
- Tableau des résultats ($HC<0$ éliminé).
- Sommaire des résultats ($HC<0$ éliminé).

De plus, à l'annexe III, on retrouve la courbe des mesures de $CO$, $CO_2$ et $O_2$.

Le trait continu est obtenu en traçant tous les points de lectures (15 secondes d'intervalle entre les points); les astérisques "*" représentent les points sélectionnés pour l'analyse.

Les différents essais sont identifiés aux tableaux 1 et 2 et tous les résultats sont résumés sous forme de tableaux (tableaux 3 et 4) et sous forme graphique aux figures 1 à 16.

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**TABLEAU 1**

IDENTIFICATION DES ESSAIS

SÉRIE NO 2

| TITRE | FICHIER | DESCRIPTION |
|---|---|---|
| Full Power 1 | 250911 | Pleine puissance. |
| Full Power 2 | 250914 | Pleine puissance. |
| 20 kw - 2 | 110914 | Puissance constante 20 kw. |
| 20 kw - 3 | 120910 | Puissance constante 20 kw. |
| 13 kw - 1 | 120914 | Puissance constante 13 kw. |
| 13 kw - 2 | 160912 | Puissance constante 13 kw. |
| 0 puiss. - 2 | 190912 | Puissance minimum. |
| 0 puiss. - 3 | 200914 | Puissance minimum. |

CRIQ CENTRE DE RECHERCHE INDUSTRIELLE DU QUÉBEC

**TABLEAU 2**

IDENTIFICATION DES ESSAIS

SÉRIE NO 3

| TITRE | FICHIER | DESCRIPTION |
|---|---|---|
| Full Power 1-3* | 231015 | Puissance maximum. |
| Full Power 2-3* | 241010 | Puissance maximum. |
| Full Power 3-3* | 241013 | Puissance maximum. |
| Full Power 4-3 | 281015 | Puissance maximum. |
| Low Power 1-3* | 241016 | Puissance maximum. |
| 18 kw-1-3 | 291015 | Puissance constante 18 kw. |
| 18 kw-2-3 | 301011 | Puissance constante 18 kw. |
| 13 kw-1-3 | 291011 | Puissance constante 13 kw. |
| 13 kw-2-3 | 301014 | Puissance constante 13 kw. |
| Low Power 2-3 | 251012 | Puissance minimum. |
| 0-Power-2-3 | 311012 | Puissance minimum. |
| 0-Power-4-3 | 011111 | Puissance minimum. |

* Aucune valeur disponible au plenum pour ces essais.

CRIQ CENTRE DE RECHERCHE INDUSTRIELLE DU QUÉBEC

# TABLEAU 3



## RESULTATS AVEC 90% DE CHARGE BRULEE
## ESSAI NO.2

| FICH. NO | TAUX KG/H | AVEC CH4<0 CONSERVE REND. % | CO g/H | CO g/MJ | CH4 g/H | CH4 g/MJ | AVEC CH4<0 ELIMINE REND. % | CO g/MJ | CH4 g/H | CH4 g/MJ |
|---|---|---|---|---|---|---|---|---|---|---|
| 250911 | 11.6 | 47 | 2226 | 22.2 | 1012 | 10.1 | 46 | 22.9 | 1060 | 10.9 |
| 250914 | 10.5 | 52 | 1591 | 15.7 | 776 | 7.6 | 51 | 16.2 | 841 | 8.6 |
| 190912 | 2.6 | 58 | 450 | 16.3 | 166 | 6.0 | 56 | 16.9 | 183 | 6.8 |
| 200914 | 2.7 | 58 | 485 | 16.6 | 172 | 5.8 | 54 | 18.0 | 215 | 8.0 |
| 110914 | 9.4 | 47 | 1666 | 20.5 | 862 | 10.6 | 46 | 20.8 | 876 | 10.9 |
| 120910 | 8.2 | 52 | 1288 | 16.3 | 628 | 8.0 | 50 | 16.9 | 671 | 8.8 |
| 120914 | 4.2 | 59 | 574 | 12.7 | 252 | 5.6 | 56 | 13.4 | 292 | 6.8 |
| 160912 | 4.5 | 56 | 691 | 15.0 | 3.3 | 6.9 | 53 | 15.7 | 351 | 8.0 |

## RESULTATS AVEC 100% DE CHARGE BRULEE
## ESSAI NO.2

| FICH. NO | TAUX KG/H | AVEC CH4<0 CONSERVE REND. % | CO g/H | CO g/MJ | CH4 g/H | CH4 g/MJ | AVEC CH4<0 ELIMINE REND. % | CO g/MJ | CH4 g/H | CH4 g/MJ |
|---|---|---|---|---|---|---|---|---|---|---|
| 250911 | 7.8 | 54 | 1388 | 16.7 | 607 | 7.3 | 52 | 17.2 | 648 | 8.0 |
| 250914 | 7.6 | 58 | 1067 | 12.1 | 492 | 5.6 | 56 | 12.6 | 552 | 6.5 |
| 190912 | 2.2 | 64 | 409 | 14.9 | 114 | 4.2 | 61 | 15.7 | 138 | 5.3 |
| 200914 | 2.2 | 65 | 418 | 15.1 | 107 | 3.9 | 59 | 16.7 | 154 | 6.1 |
| 110914 | 6.4 | 54 | 1041 | 15.3 | 512 | 7.5 | 53 | 15.6 | 536 | 8.1 |
| 120910 | 5.8 | 58 | 837 | 12.6 | 390 | 5.9 | 56 | 13.0 | 427 | 6.6 |
| 120914 | 3.6 | 64 | 487 | 10.6 | 181 | 4.0 | 61 | 11.3 | 229 | 5.3 |
| 160912 | 3.8 | 60 | 569 | 12.7 | 245 | 5.4 | 58 | 13.2 | 275 | 6.4 |

RESULTATS AVEC 100% DE CHARGE BRULEE
ESSAI NO.3

| | | AVEC CH4<0 CONSERVE | | | | AVEC CH4<0 ELIMINE | | | |
|---|---|---|---|---|---|---|---|---|---|
| FICH. NO | TAUX KG/H | REND. % | CO g/H | CO g/MJ | CH4 g/H | CH4 g/MJ | REND. % | CO g/MJ | CH4 g/H | CH4 g/MJ |
| 231015 | 7.8 | 76 | 1043 | 8.8 | -66 | -.6 | 62 | 10.8 | 325 | 3.4 |
| 241010 | 7.4 | 79 | 840 | 7.2 | -137 | -1.2 | 62 | 9.2 | 307 | 3.4 |
| 241013 | 9.0 | 68 | 1614 | 13.3 | 144 | 1.2 | 58 | 15.7 | 482 | 4.7 |
| 281015 | 7.4 | 75 | 829 | 7.5 | -31 | -.3 | 62 | 9.2 | 317 | 3.5 |
| 241016 | 8.6 | 74 | 1245 | 9.8 | -13 | -.1 | 60 | 12.2 | 435 | 4.3 |
| 291015 | 6.5 | 61 | 1047 | 13.4 | 367 | 4.7 | 58 | 14.1 | 442 | 6.0 |
| 301011 | 5.6 | 67 | 721 | 9.7 | 189 | 2.5 | 61 | 10.7 | 309 | 4.6 |
| 291011 | 3.9 | 66 | 588 | 11.6 | 151 | 3.0 | 62 | 12.5 | 211 | 4.5 |
| 301014 | 4.2 | 64 | 687 | 13.0 | 209 | 4.0 | 59 | 14.0 | 275 | 5.6 |
| 251012 | 1.9 | 70 | 367 | 13.6 | 53 | 2.0 | 59 | 16.3 | 131 | 5.8 |
| 301012 | 1.5 | 63 | 321 | 17.3 | 69 | 3.7 | 60 | 18.2 | 86 | 4.9 |
| 011111 | 1.7 | 59 | 431 | 21.5 | 99 | 5.0 | 57 | 22.2 | 110 | 5.6 |

RESULTATS AVEC 90% DE CHARGE BRULEE
ESSAI NO.3

| | | AVEC CH4<0 CONSERVE | | | | AVEC CH4<0 ELIMINE | | | |
|---|---|---|---|---|---|---|---|---|---|
| FICH. NO | TAUX KG/H | REND. % | CO g/H | CO g/MJ | CH4 g/H | CH4 g/MJ | REND. % | CO g/MJ | CH4 g/H | CH4 g/MJ |
| 231015 | 9.6 | 70 | 1388 | 11.2 | 78 | .6 | 58 | 13.4 | 443 | 4.3 |
| 241010 | 9.9 | 71 | 1181 | 9.1 | 52 | .4 | 59 | 11.1 | 452 | 4.2 |
| 241013 | 12.9 | 60 | 2534 | 17.9 | 479 | 3.4 | 53 | 20.1 | 766 | 6.1 |
| 281015 | 9.8 | 69 | 1181 | 9.5 | 131 | 1.0 | 58 | 11.2 | 468 | 4.4 |
| 241016 | 11.7 | 66 | 1839 | 13.0 | 265 | 1.9 | 55 | 15.4 | 653 | 5.5 |
| 291015 | 8.0 | 54 | 1358 | 16.9 | 551 | 6.9 | 52 | 17.6 | 603 | 7.8 |
| 301011 | 6.9 | 63 | 908 | 11.4 | 279 | 3.5 | 57 | 12.5 | 413 | 5.7 |
| 291011 | 4.4 | 62 | 667 | 13.2 | 200 | 4.0 | 58 | 14.2 | 262 | 5.6 |
| 301014 | 4.7 | 60 | 778 | 14.8 | 264 | 5.0 | 55 | 16.1 | 338 | 7.0 |
| 251012 | 2.4 | 63 | 396 | 14.1 | 124 | 4.4 | 55 | 16.0 | 182 | 7.4 |
| 311012 | 1.6 | 59 | 317 | 18.1 | 87 | 4.9 | 56 | 19.0 | 102 | 6.1 |
| 011111 | 2.1 | 55 | 461 | 22.2 | 131 | 6.3 | 53 | 22.7 | 140 | 6.9 |

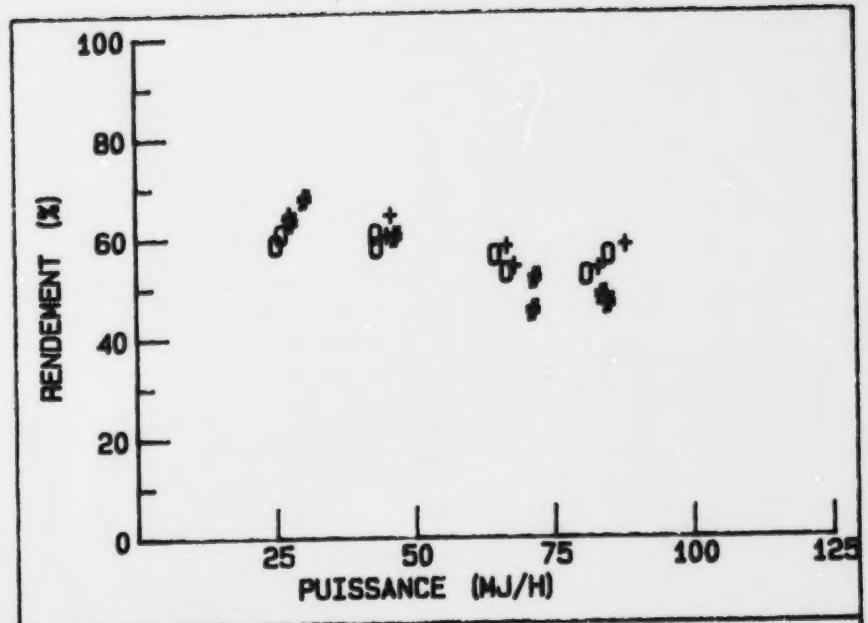
RESULTATS AVEC 100% DE CHARGE BRULEE

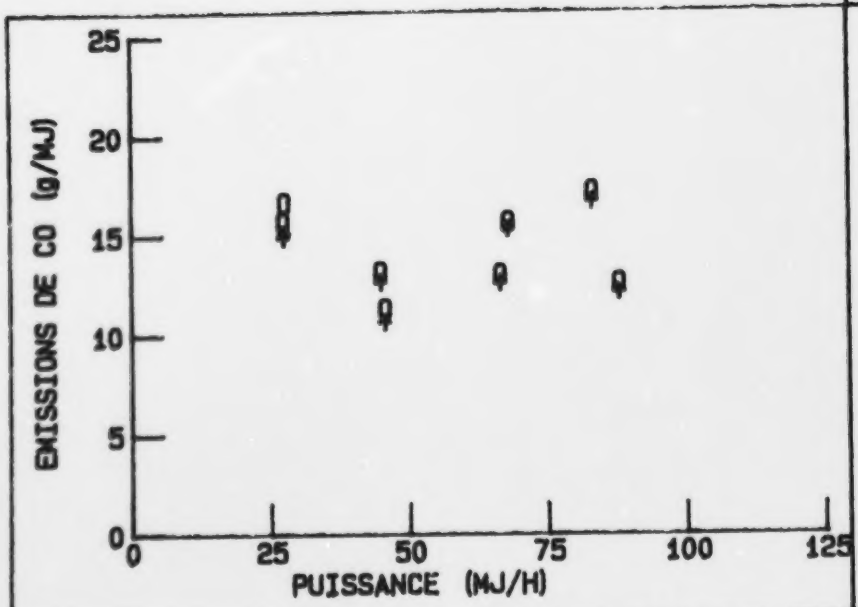
ESSAI NO.2

+ AVEC HC<0 CONSERVE

0 AVEC HC<0 ELIMINE

# MESURES AU PLENUM



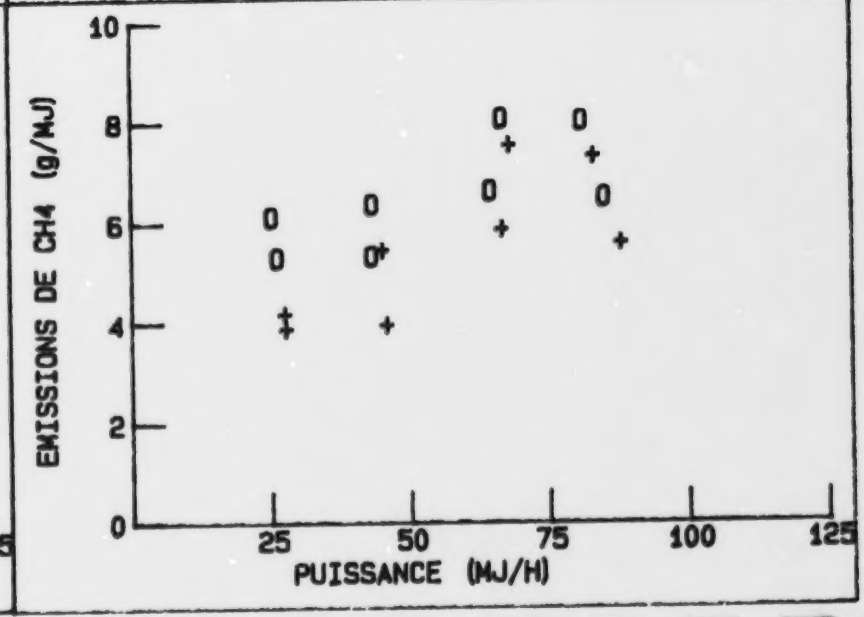




FIGURE NO 1

RESULTATS AVEC 100% DE CHARGE BRULEE

ESSAI NO.2

\+ AVEC HC<0 CONSERVE

0 AVEC HC<0 ELIMINE

\# MESURES AU PLENUM

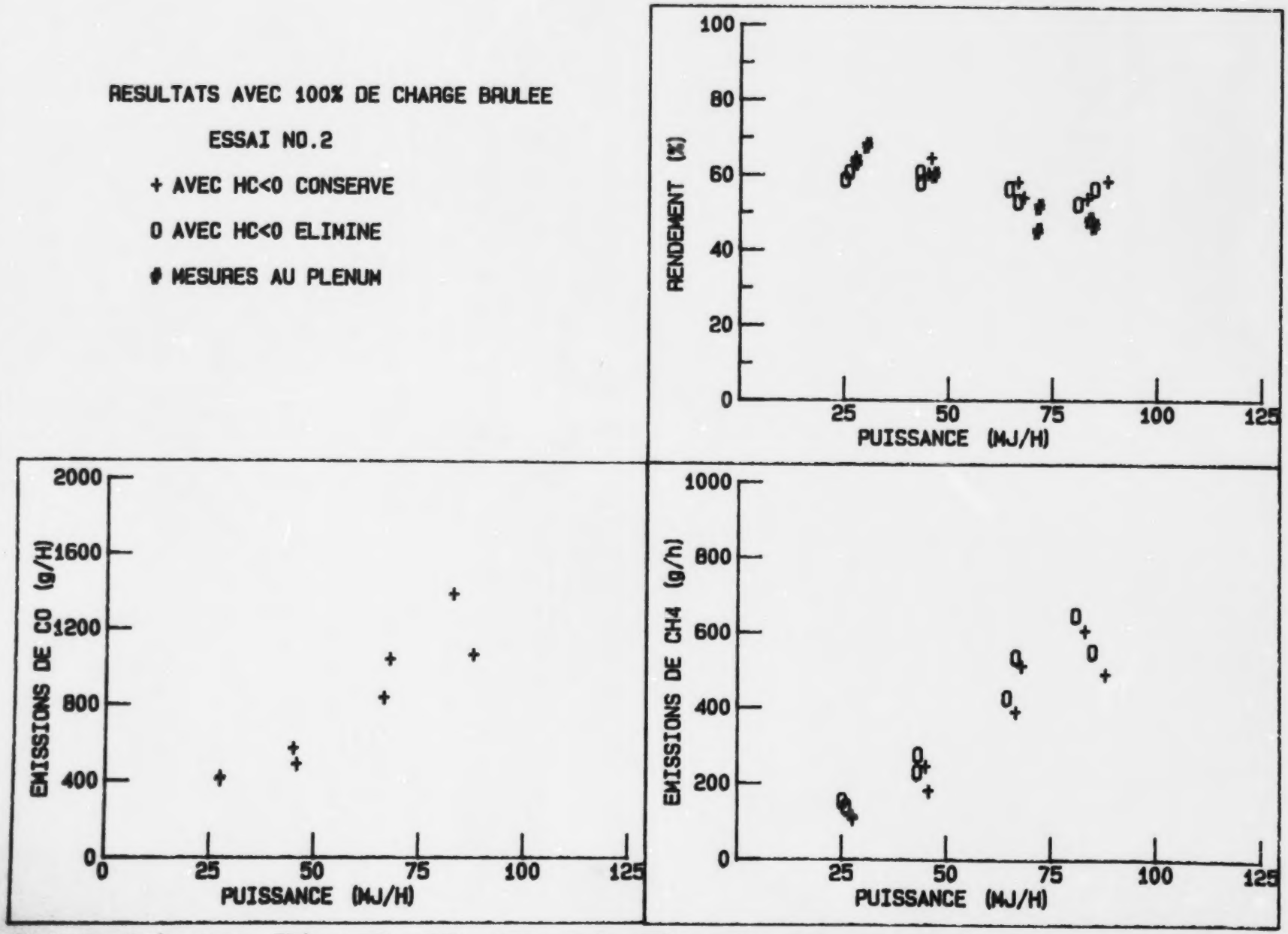
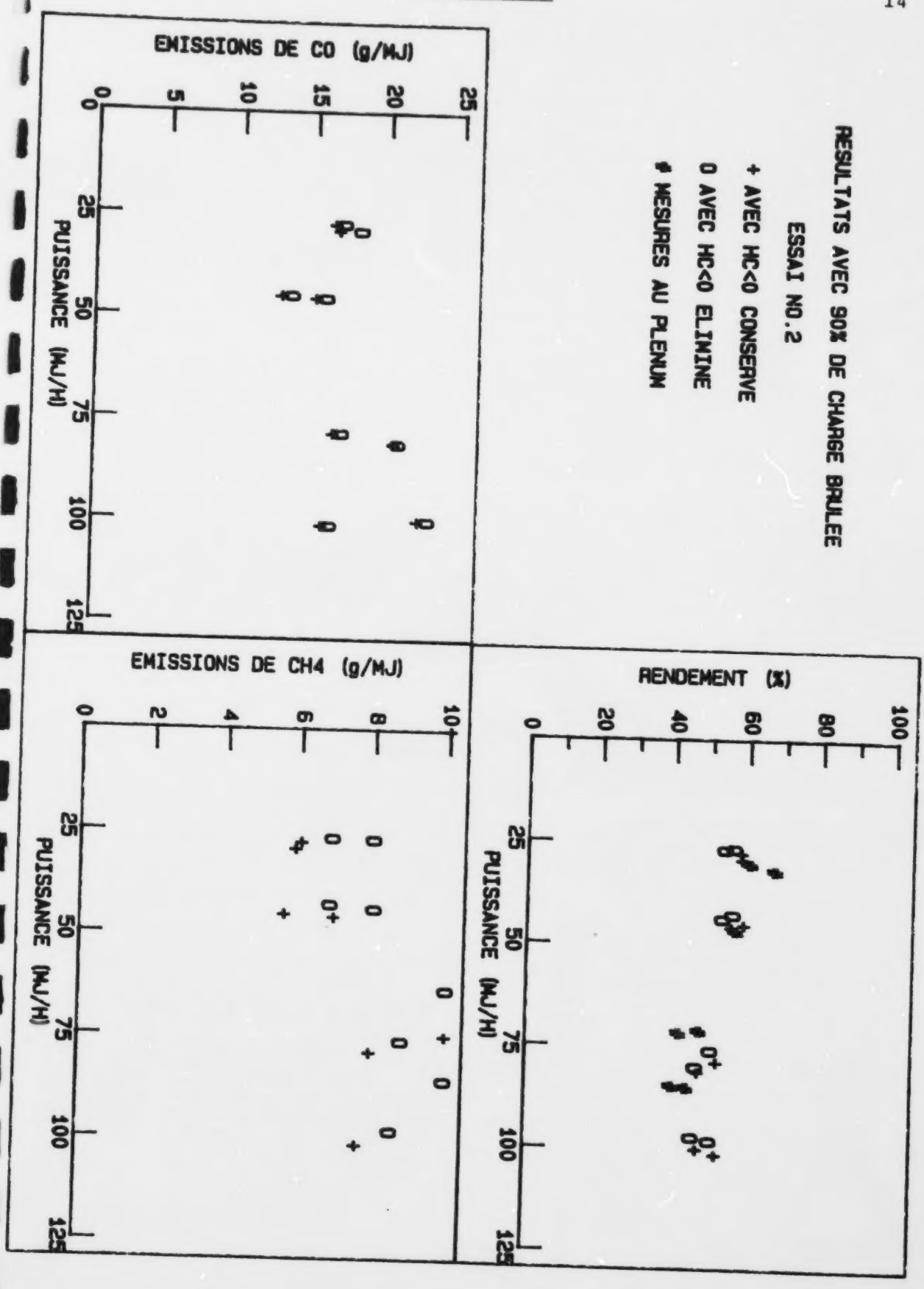



FIGURE NO 2

FIGURE NO 3




RESULTATS AVEC 90% DE CHARGE BRULEE
ESSAI NO.2
+ AVEC HC<0 CONSERVE
O AVEC HC<0 ELIMINE
# MESURES AU PLENUM
EMISSIONS DE CO (g/MJ)
EMISSIONS DE CH4 (g/MJ)
RENDEMENT (%)
PUISSANCE (MJ/H)
0
5
10
15
20
25
40
60
80
100
50
75
125

RESULTATS AVEC 90% DE CHARGE BRULEE

ESSAI NO.2

+ AVEC HC<0 CONSERVE

0 AVEC HC<0 ELIMINE

# MESURES AU PLENUM

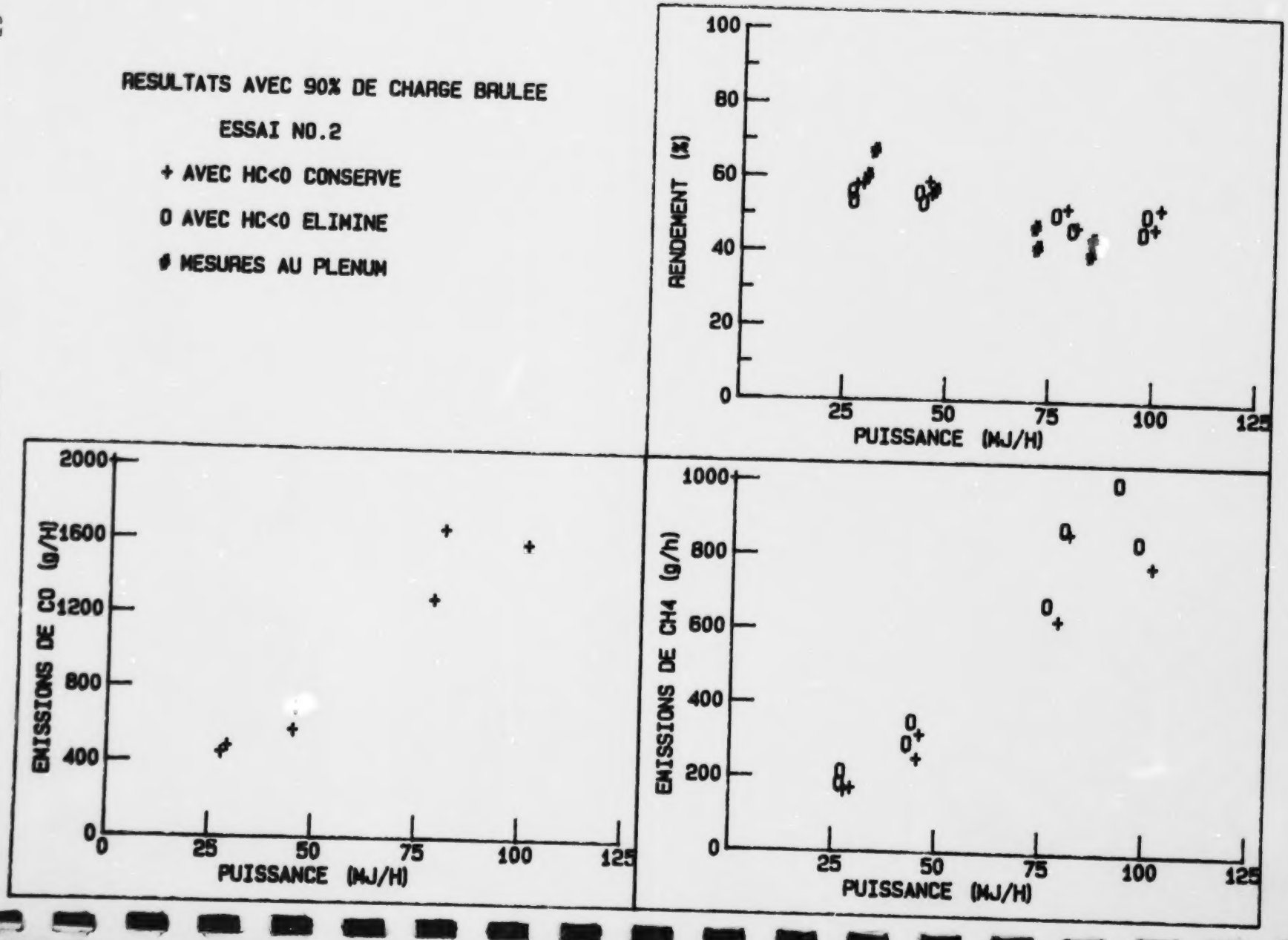



FIGURE NO 4

RESULTATS AVEC 100% DE CHARGE BRULEE

ESSAI NO.2

\+ AVEC HC<0 CONSERVE

0 AVEC HC<0 ELIMINE

# MESURES AU PLENUM

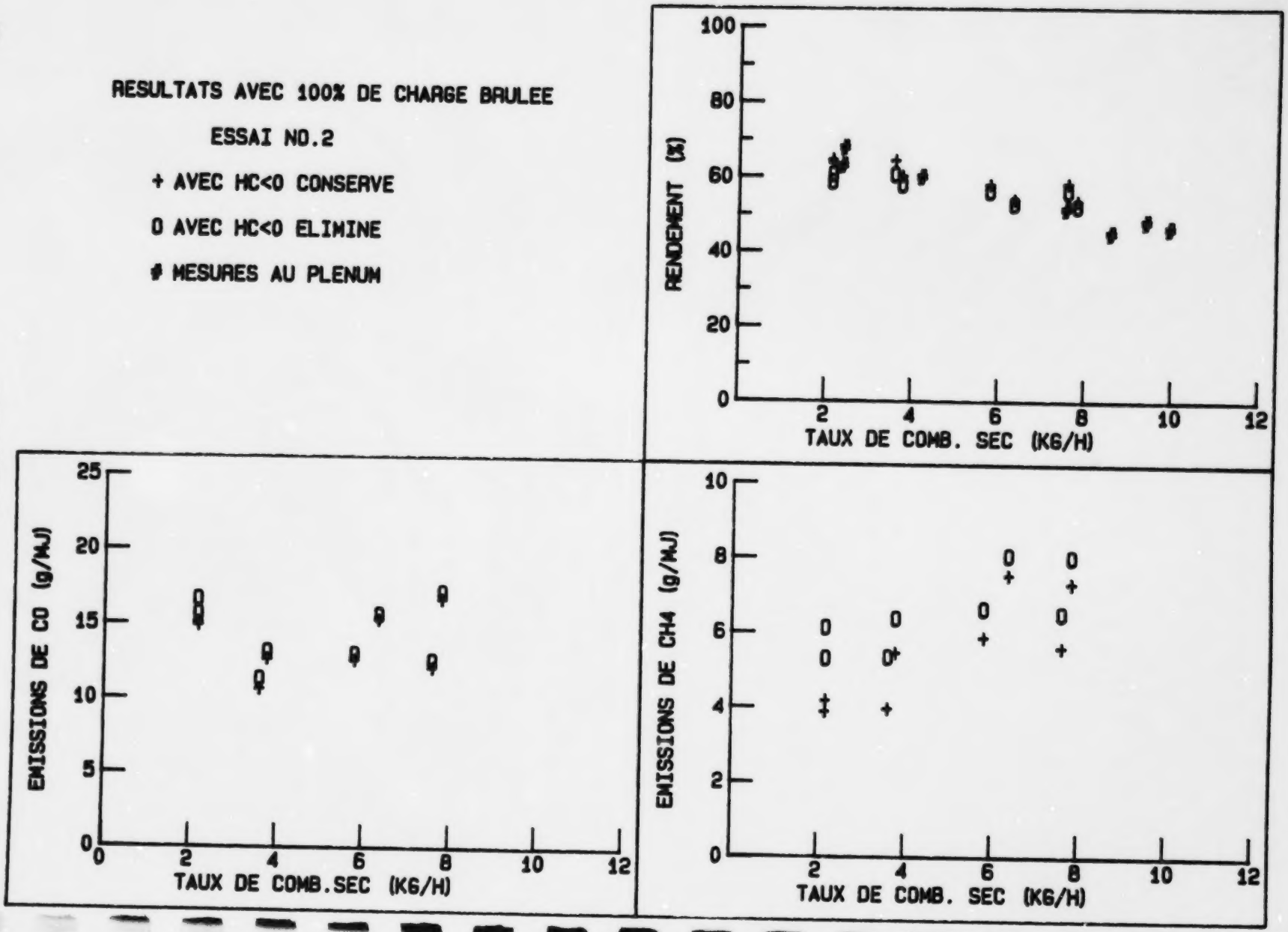



FIGURE NO 5

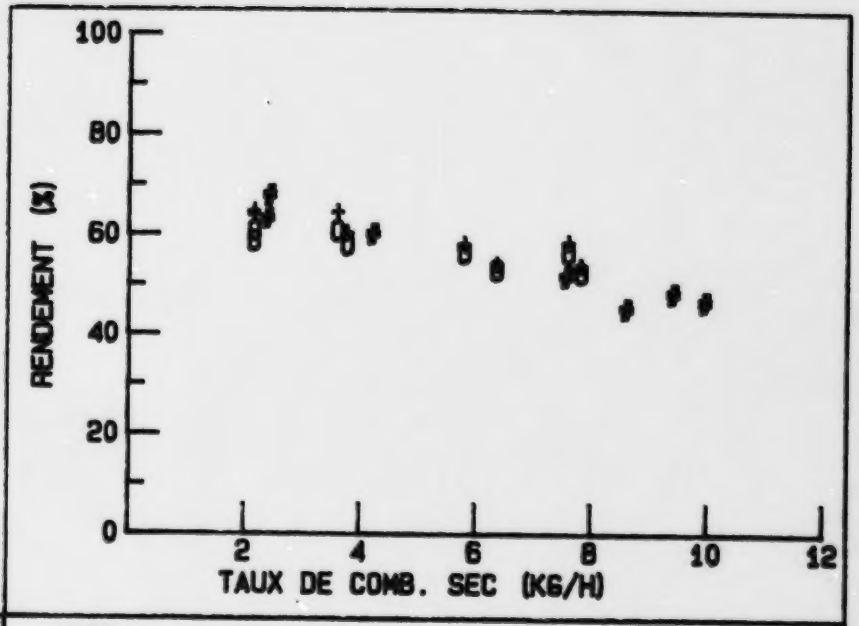
RESULTATS AVEC 100% DE CHARGE BRULEE

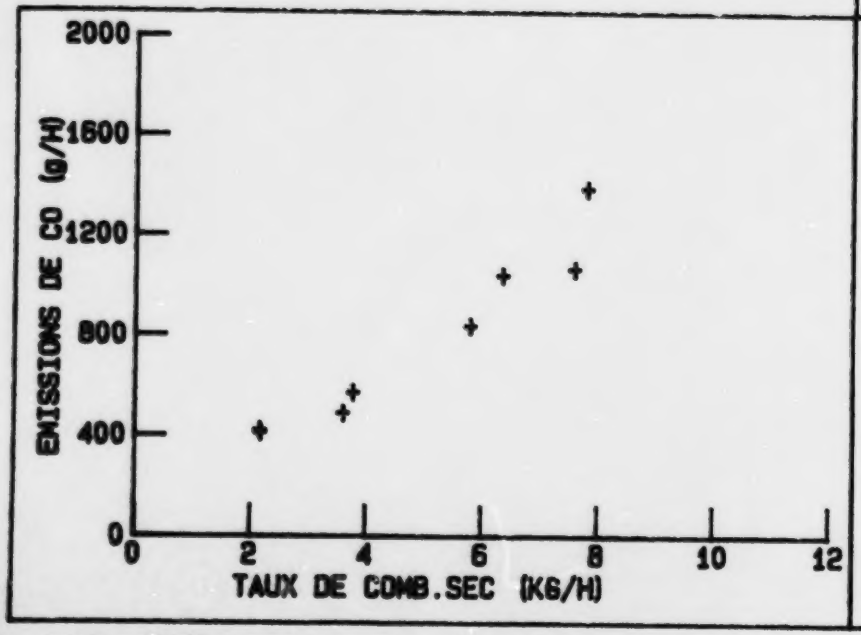
ESSAI NO.2

+ AVEC HC<0 CONSERVE

0 AVEC HC<0 ELIMINE

# MESURES AU PLENUM



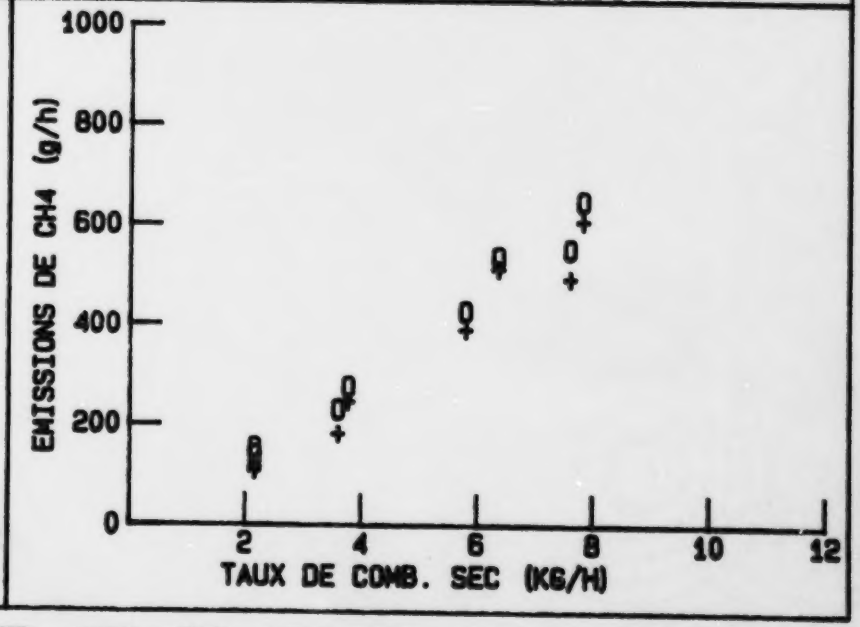




FIGURE NO 6

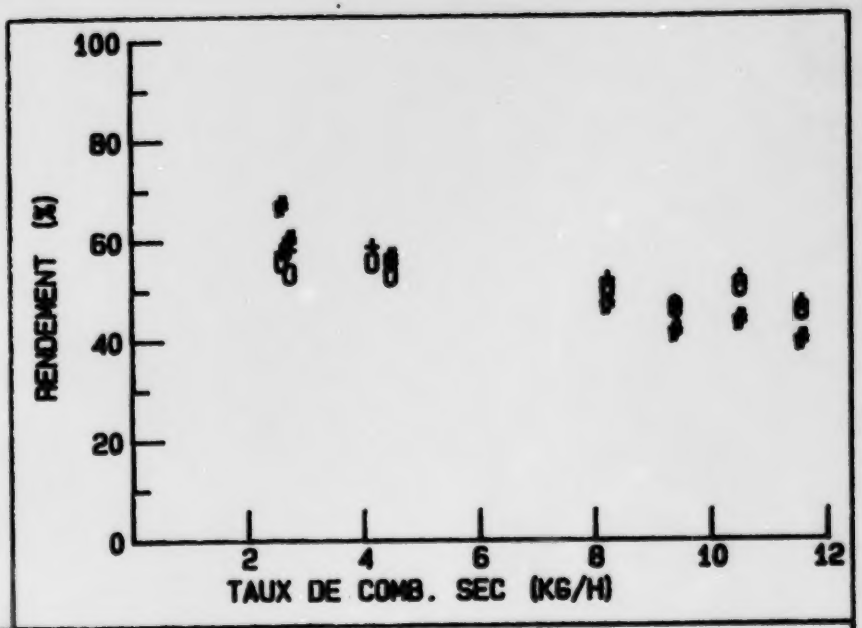
RESULTATS AVEC 90% DE CHARGE BRULEE

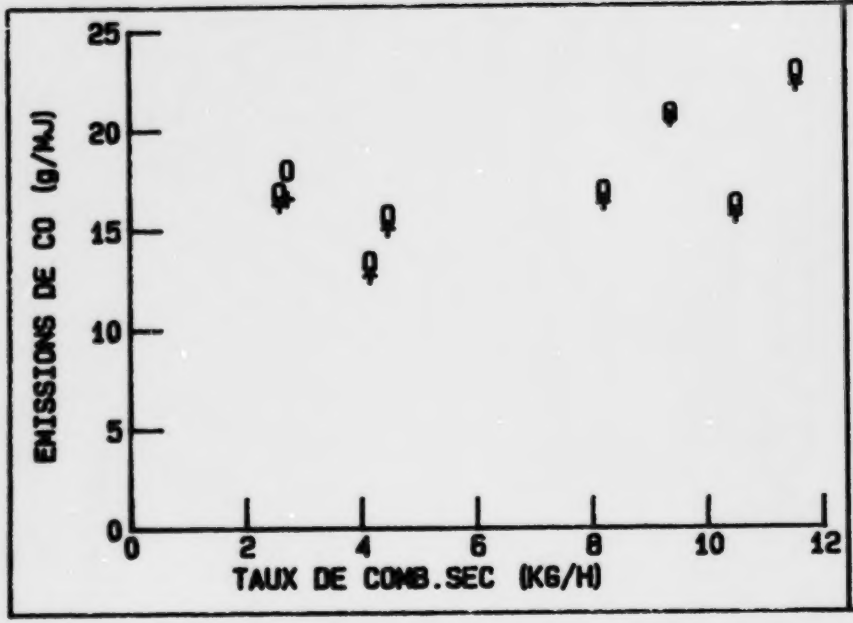
ESSAI NO.2

\+ AVEC HC<0 CONSERVE

0 AVEC HC<0 ELIMINE

# MESURES AU PLENUM



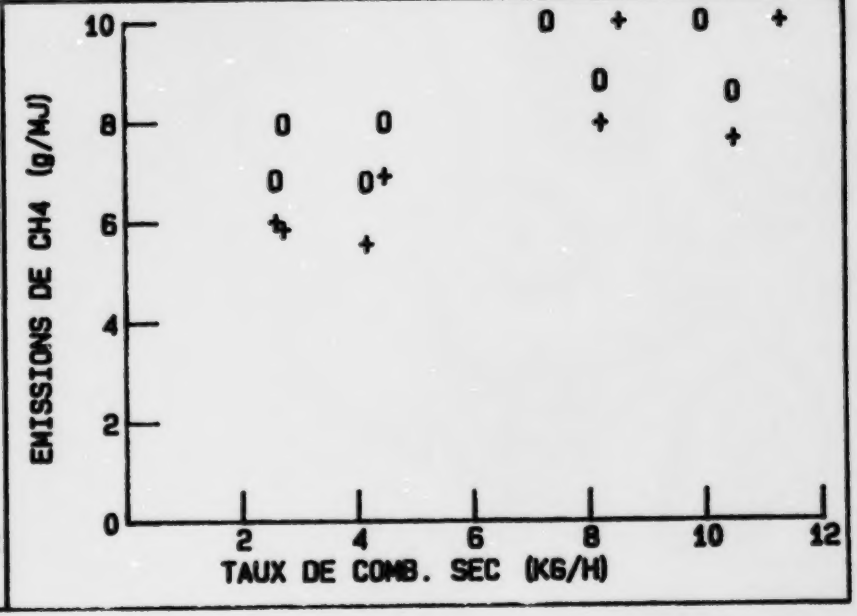




FIGURE NO 7

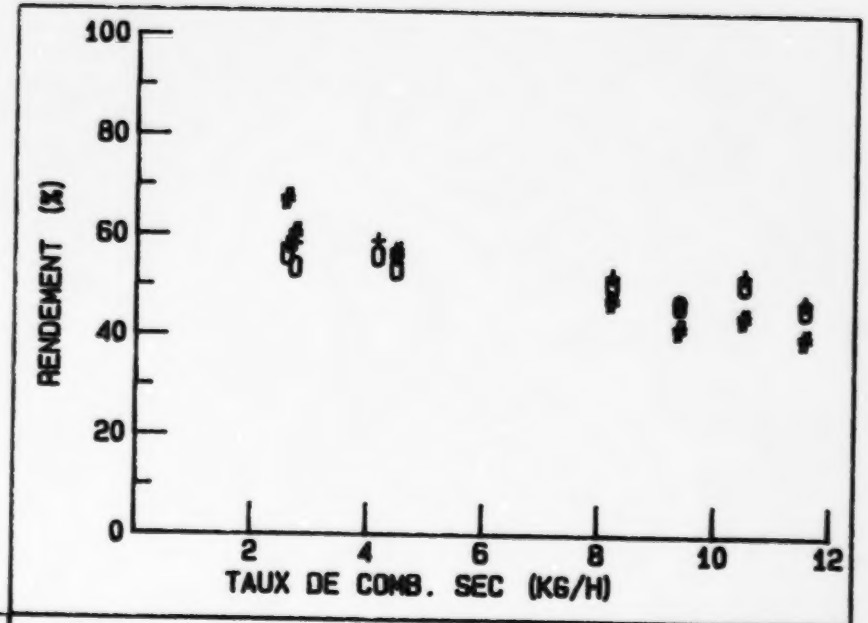
RESULTATS AVEC 90% DE CHARGE BRULEE

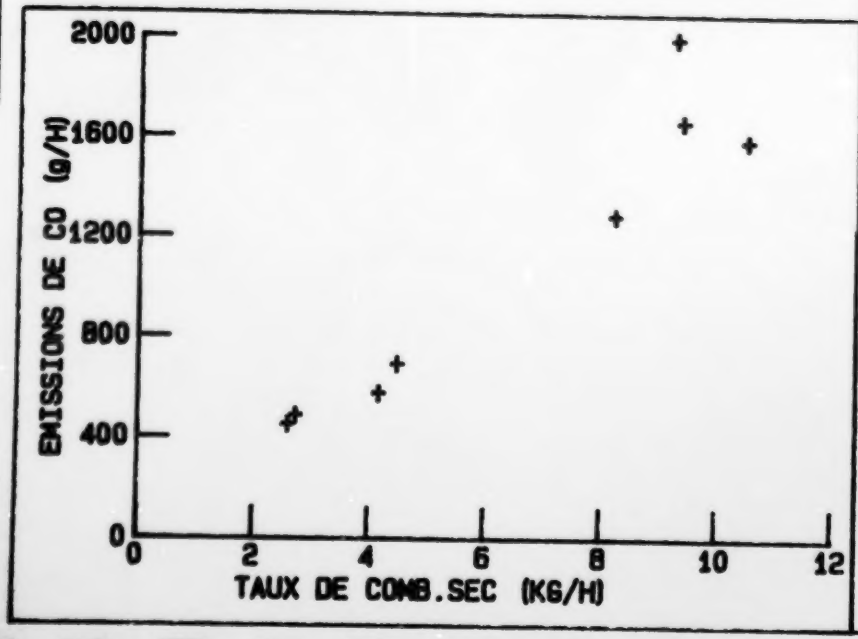
ESSAI NO.2

\+ AVEC HC<0 CONSERVE

0 AVEC HC<0 ELIMINE

# MESURES AU PLENUM



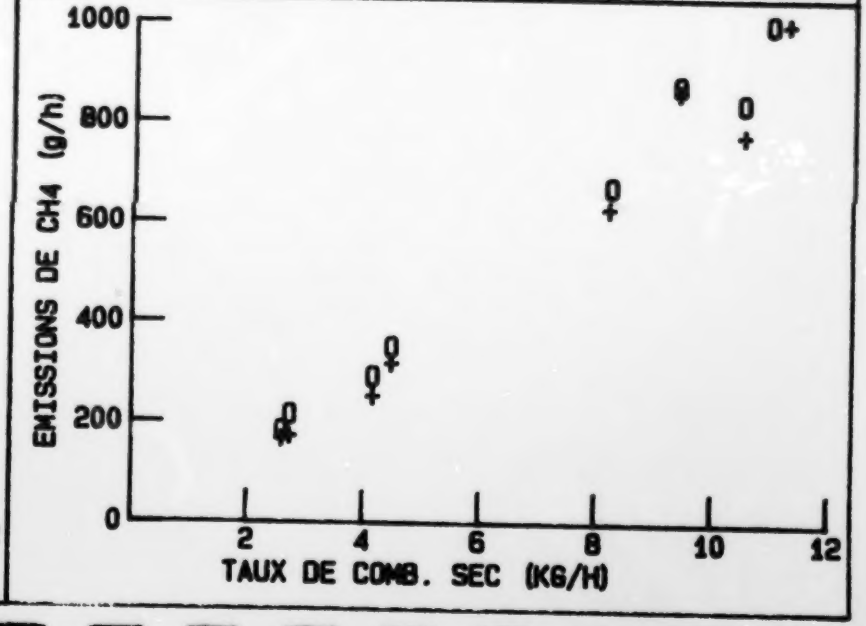




FIGURE NO 8

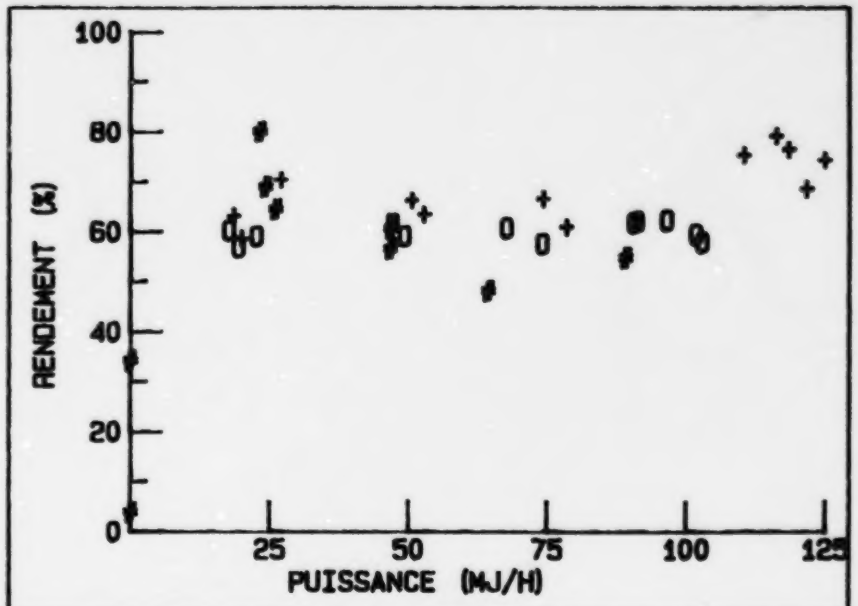
RESULTATS AVEC 100% DE CHARGE BRULEE

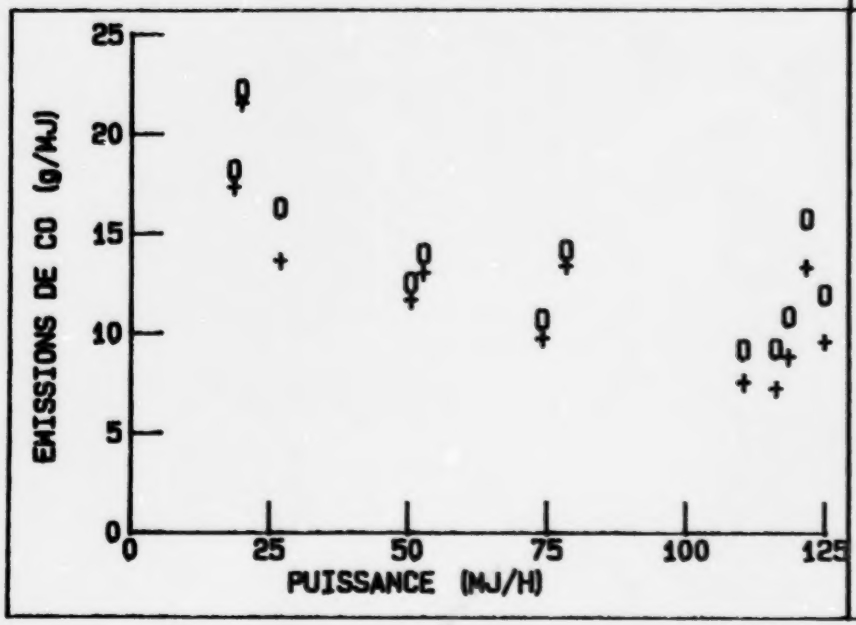
ESSAI NO.3

\+ AVEC HC<0 CONSERVE

0 AVEC HC<0 ELIMINE

# MESURES AU PLENUM



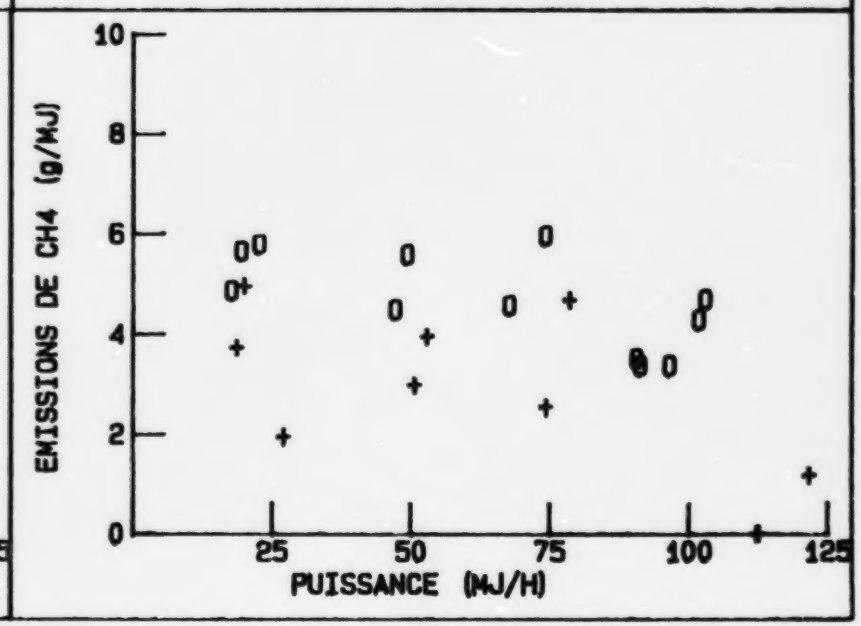




FIGURE NO 9

RESULTATS AVEC 100% DE CHARGE BRULEE

ESSAI NO.3

\+ AVEC HC<0 CONSERVE

0 AVEC HC<0 ELIMINE

# MESURES AU PLENUM

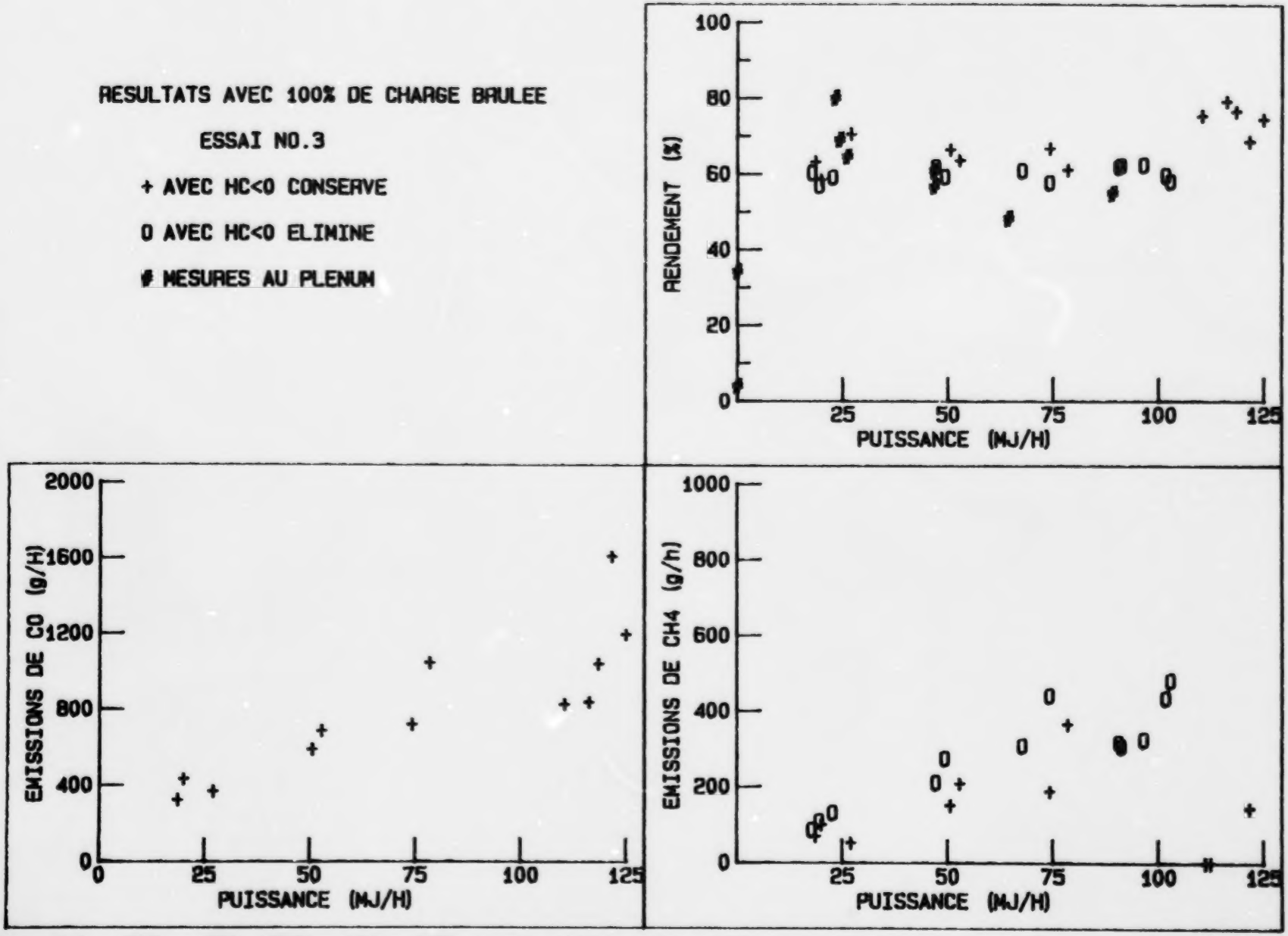



FIGURE NO 10

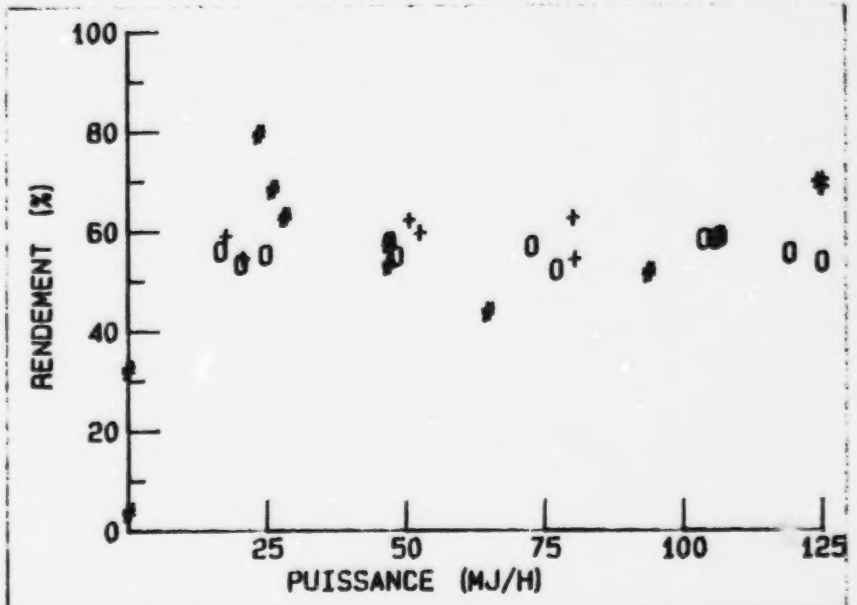
RESULTATS AVEC 90% DE CHARGE BRULEE

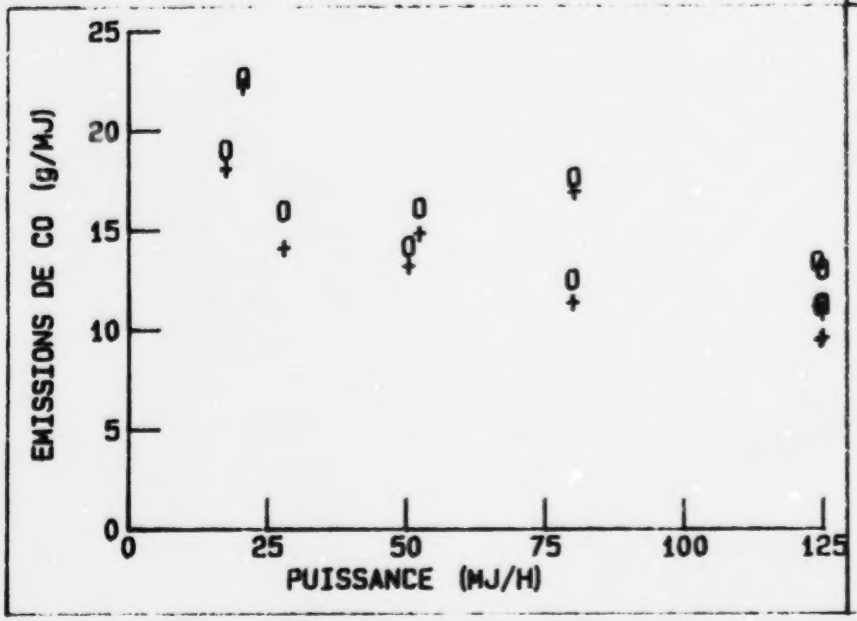
ESSAI NO.3

+ AVEC HC<0 CONSERVE

0 AVEC HC<0 ELIMINE

# MESURES AU PLENUM



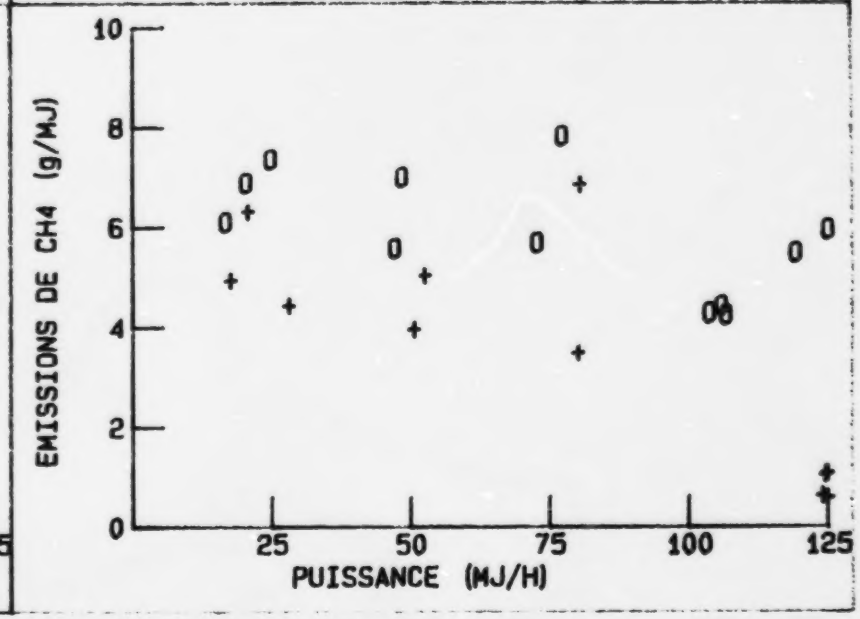




FIGURE NO 11

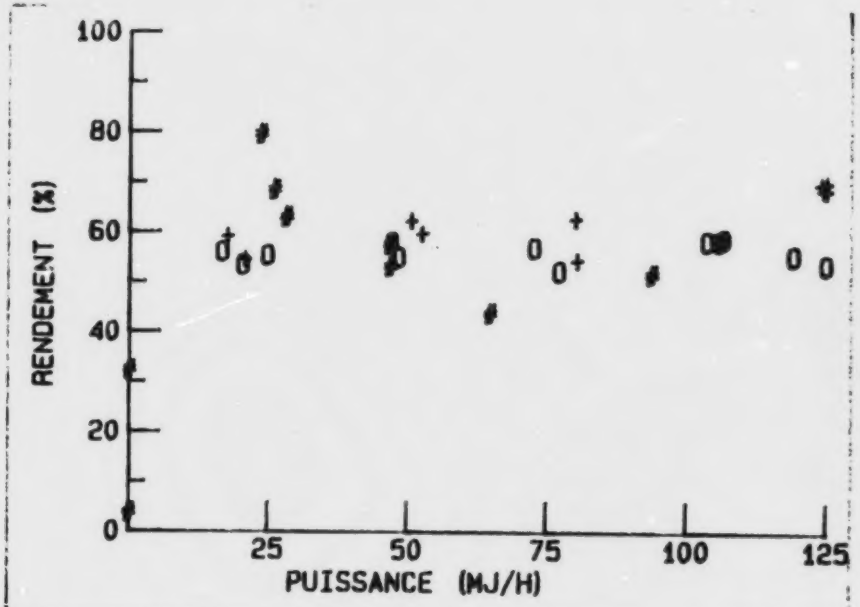
RESULTATS AVEC 90% DE CHARGE BRULEE

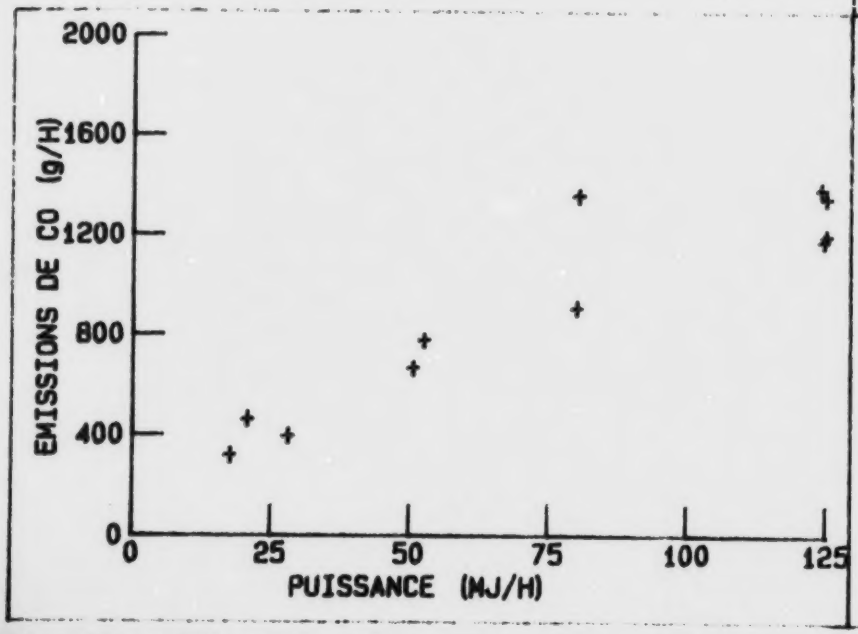
ESSAI NO.3

\+ AVEC HC<0 CONSERVE

0 AVEC HC<0 ELIMINE

# MESURES AU PLENUM



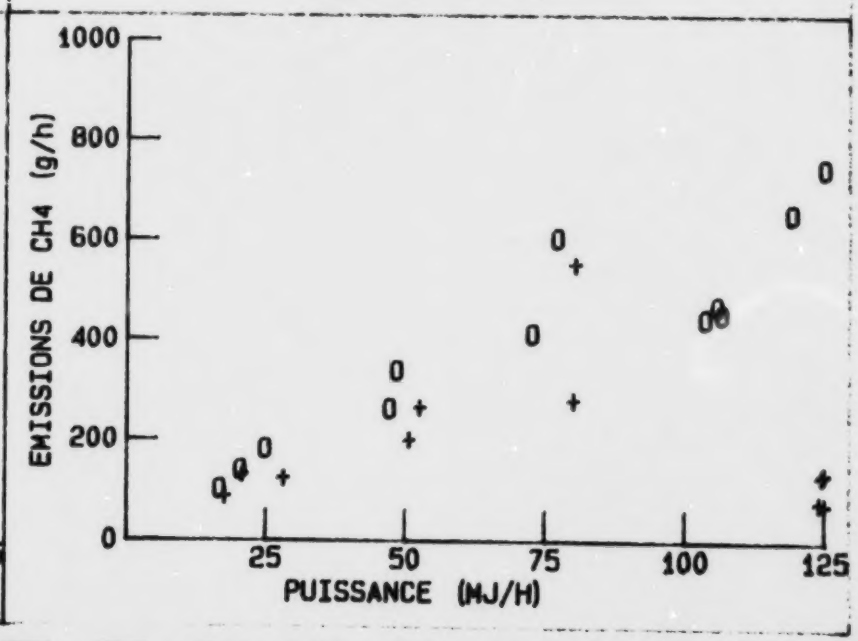




FIGURE NO 12

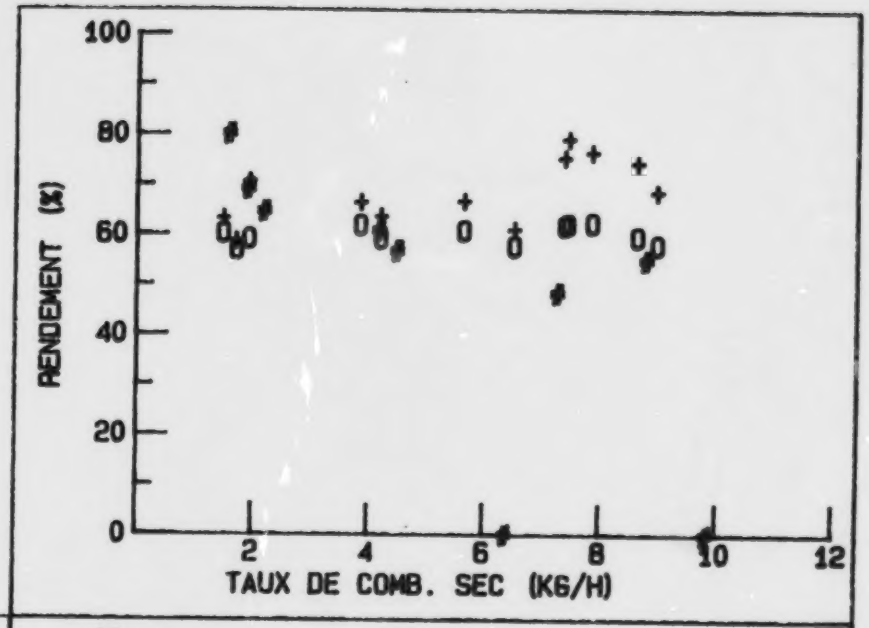
RESULTATS AVEC 100% DE CHARGE BRULEE

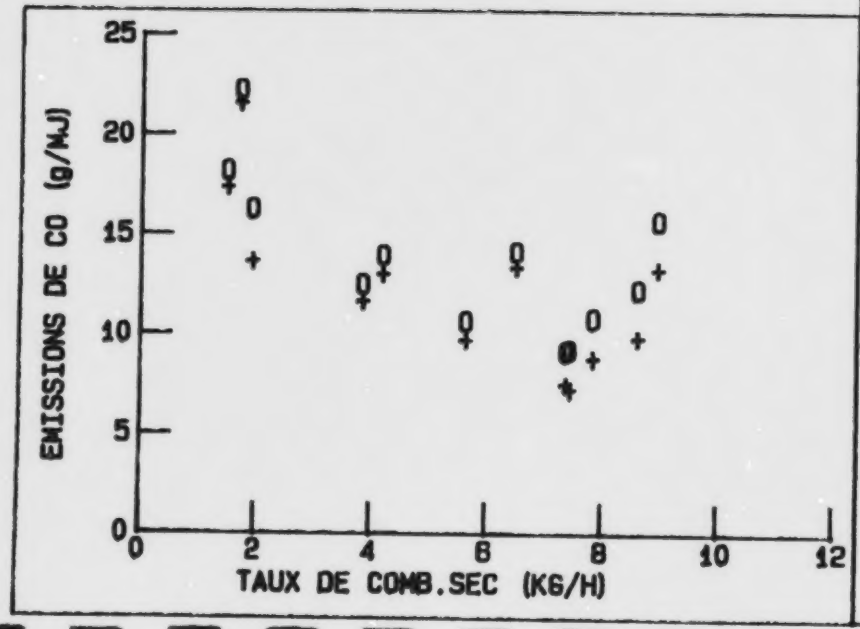
ESSAI NO.3

+ AVEC HC<0 CONSERVE

0 AVEC HC<0 ELIMINE

# MESURES AU PLENUM



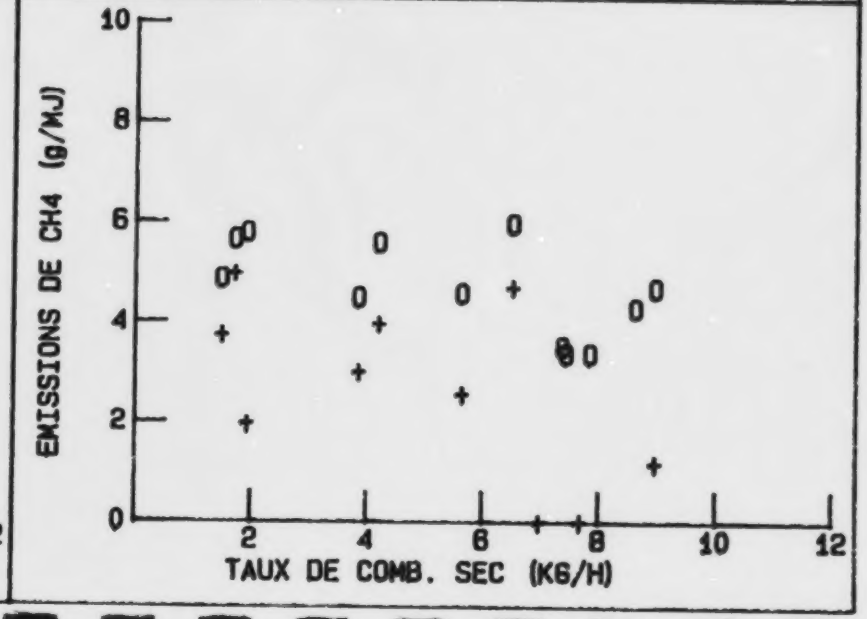




FIGURE NO 13

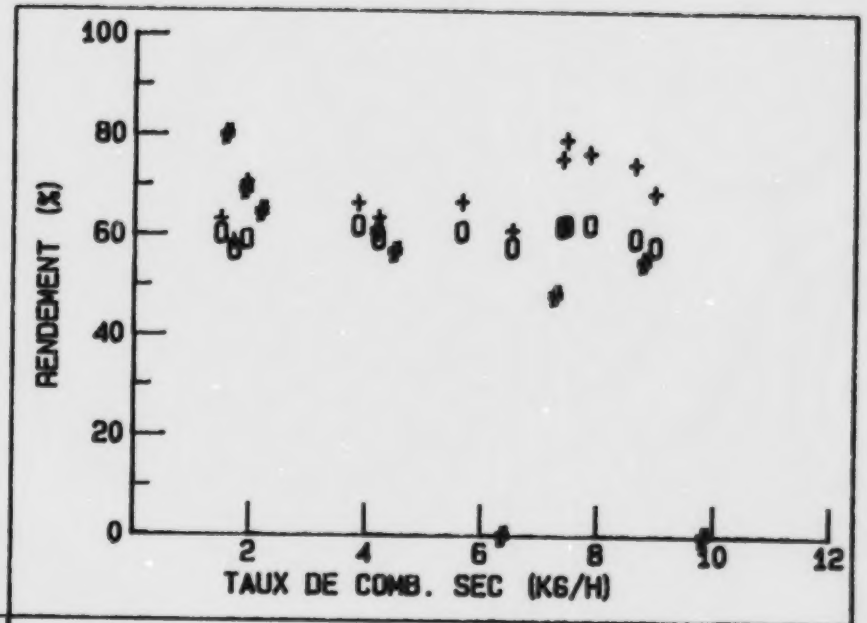
RESULTATS AVEC 100% DE CHARGE BRULEE

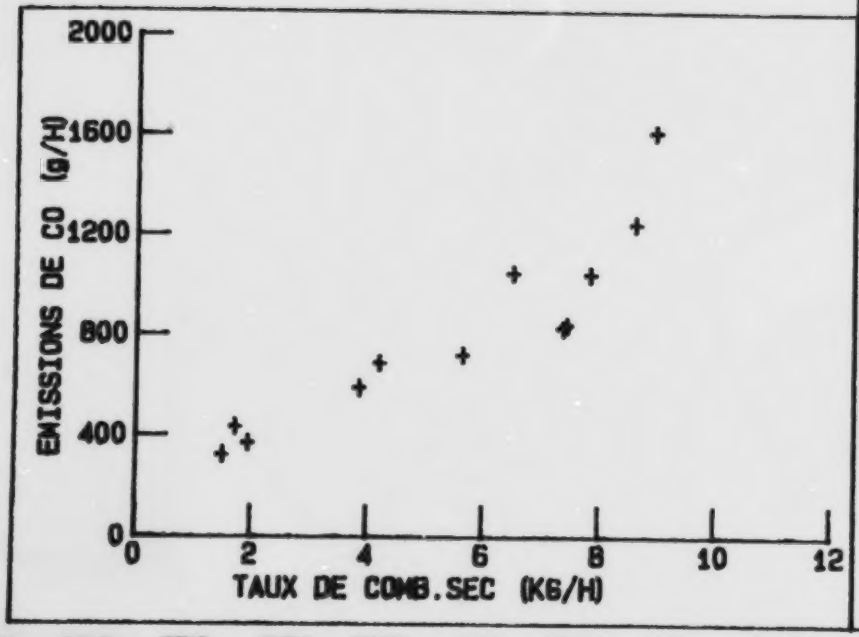
ESSAI NO.3

\+ AVEC HC<0 CONSERVE

0 AVEC HC<0 ELIMINE

# MESURES AU PLENUM



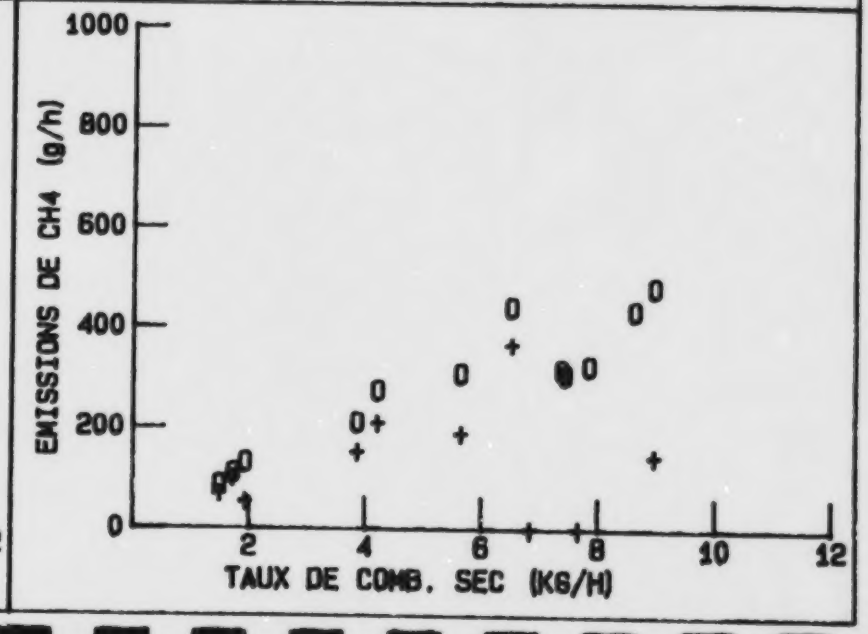




FIGURE NO 14

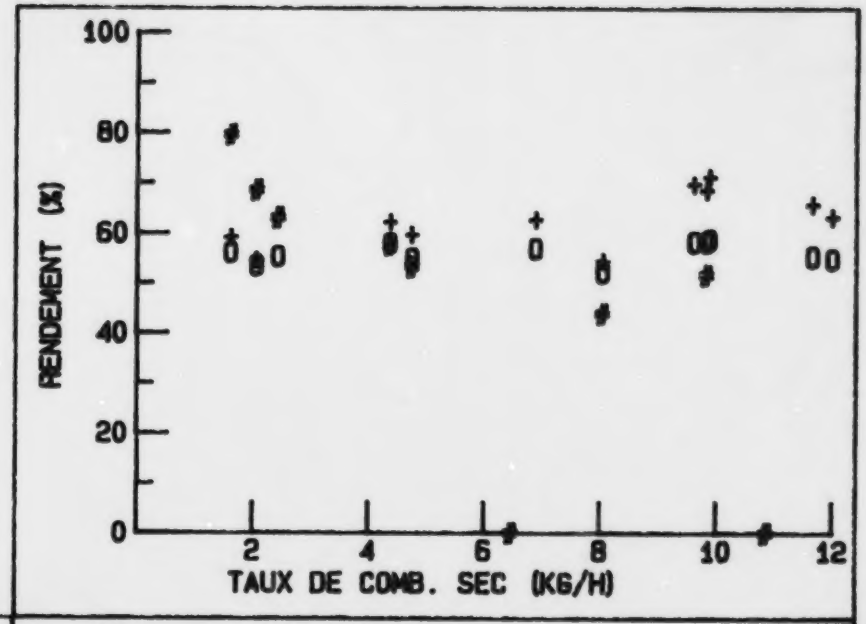
RESULTATS AVEC 90% DE CHARGE BRULEE

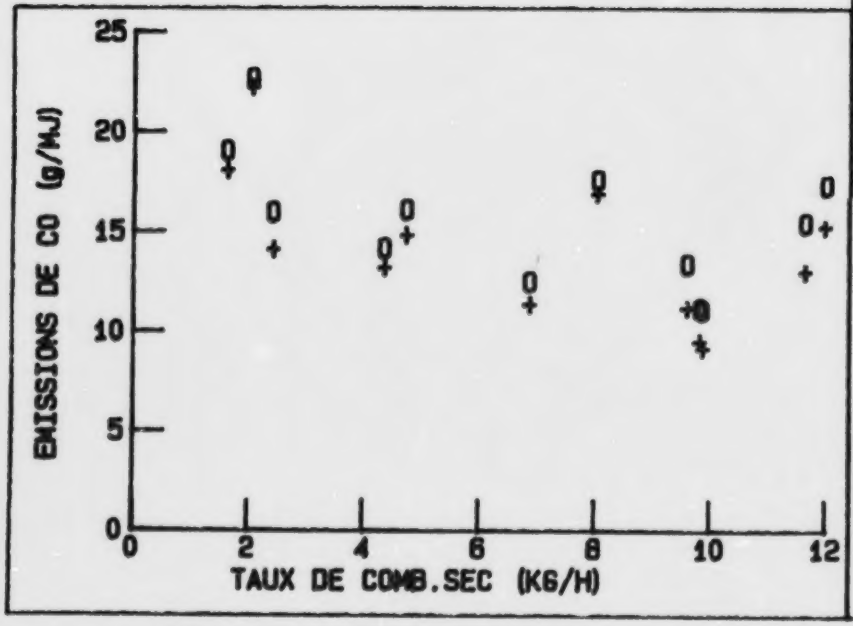
ESSAI NO.3

\+ AVEC HC<0 CONSERVE

0 AVEC HC<0 ELIMINE

\# MESURES AU PLENUM



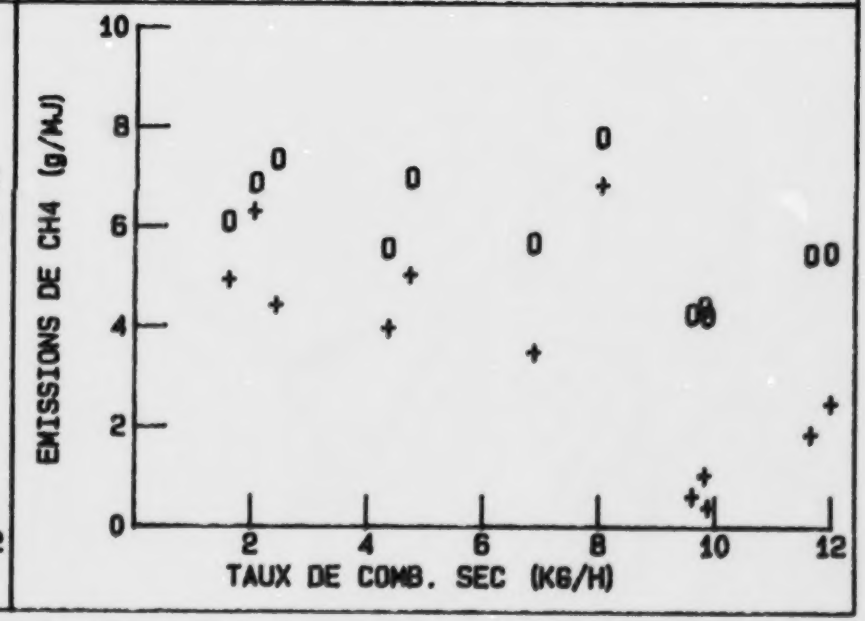




FIGURE NO 15

RESULTATS AVEC 90% DE CHARGE BRULEE

ESSAI NO.3

\+ AVEC HC<0 CONSERVE

0 AVEC HC<0 ELIMINE

# MESURES AU PLENUM

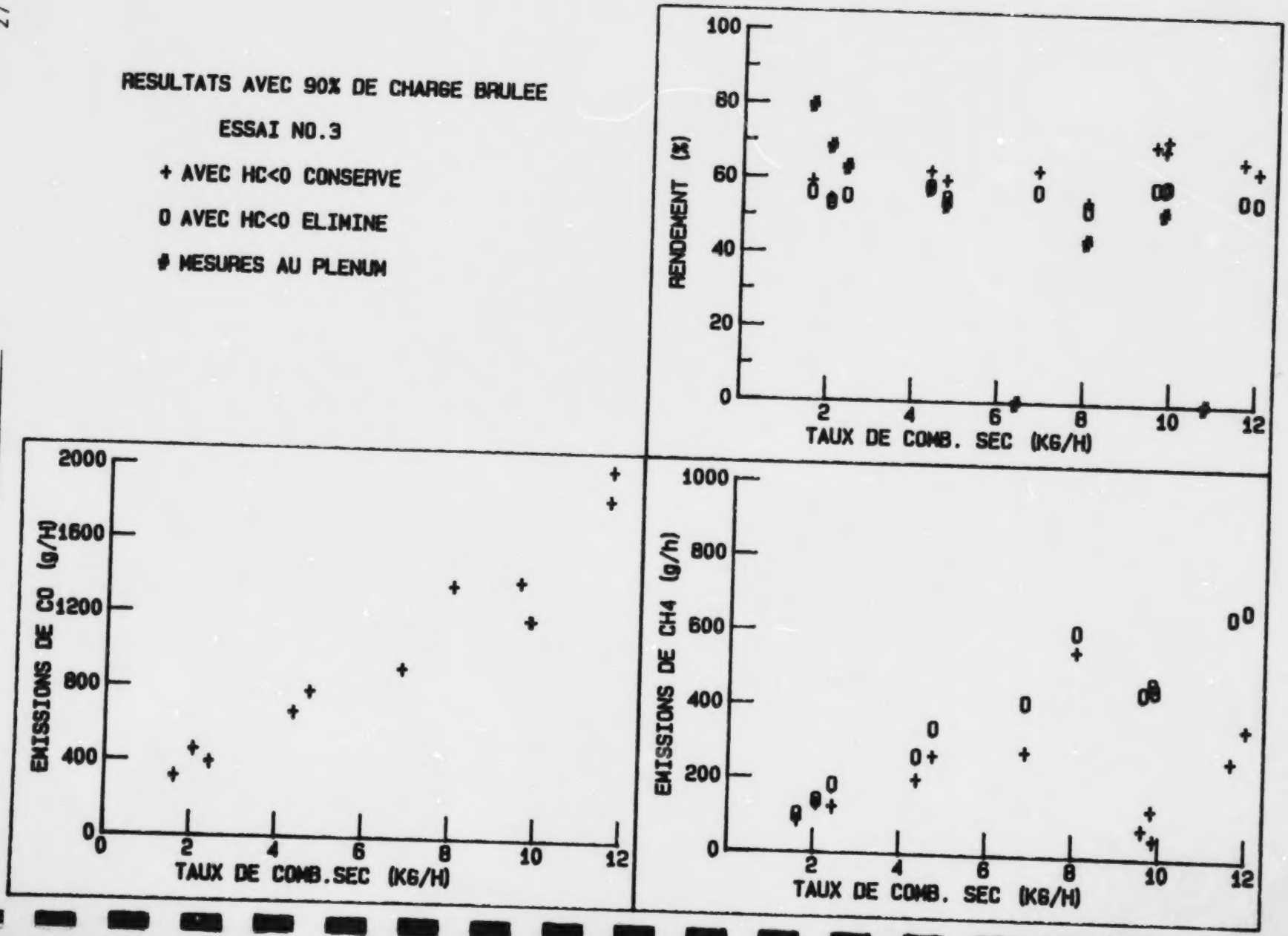



FIGURE NO 16

## 7.0 DISCUSSION DES RÉSULTATS

### 7.1 Fréquence d'échantillonnage

On donne à l'annexe II, des résultats de la série no 2 pour un essai à 20 kw et 13 kw où l'on a utilisé différents taux d'échantillonnage des données pour l'analyse. Les deux paramètres que l'on a fait varier sont:

- IP= intervalle de charge brûlée entre les lectures (2,5 et 5%).

- NL= nombre de lectures consécutives prises au changement d'état (ON/OFF) de la commande de puissance de l'appreil.

On résume les résultats au tableau 5 pour une analyse à 100% de charge brûlée en conservant les hydrocarbures négatifs.

L'examen des courbes et l'analyse du tableau 5 démontrent très bien qu'il est suffisant de prendre une seule lecture au changement d'état de la commande de puissance de l'appareil. En effet, l'analyse avec NL= 5 donne exactement les mêmes résultats qu'avec NL= 1.

D'autre part, en diminuant la fréquence d'échantillonnage de 2,5 à 5%, on note une légère différence dans les résultats.

Nous recommandons donc de faire les lectures à tous les 2,5% de charge brûlée avec en plus, pour les cas à puissance intermédiaire, une lecture à chaque changement d'état de la commande de puissance de l'appareil. Toutefois, on doit noter qu'une fréquence de lecture de 5% pourrait quand même être acceptable.

**TABLEAU 5**

FRÉQUENCE D'ÉCHANTILLONNAGE

| TITRE | FICHIER | IP % | NL | RENDEMENT % | CO (g/MJ) | CO (g/h) | $CH_4$ (g/MJ) | $CH_4$ (g/h) |
|---|---|---|---|---|---|---|---|---|
| 20 kw-1 | 300913 | 2,5 | 1 | 57,6 | 13,6 | 869 | 5,6 | 360 |
| 20 kw-1 | 300913 | 2,5 | 5 | 57,7 | 13,6 | 870 | 5,6 | 358 |
| 20 kw-1 | 300913 | 5 | 1 | 57,1 | 13,9 | 880 | 5,9 | 370 |
| 13 kw-2 | 160912 | 2,5 | 1 | 60,2 | 12,7 | 569 | 5,4 | 245 |
| 13 kw-2 | 160912 | 5 | 1 | 60,8 | 12,3 | 559 | 5,3 | 241 |

IP: Intervalle de poids entre les lectures.

NL: Nombre de lectures consécutives au changement d'état de la commande de puissance de l'appareil.



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## 7.2 Rendement et émission

Se référant aux tableaux 3 et 4 et aux figures 1 à 16, on obtient des résultats similaires à ceux du rapport préliminaire (Série no 1).

Comme précédemment, les émissions présentées en "g/h" indiquent mieux les tendances que la présentation en "g/MJ". Ceci est toutefois plus vrai pour le $CH_4$ que pour le monoxyde de carbone. De plus, le problème des hydrocarbures négatifs dans les calculs restent encore à solutionner.

Dans l'ensemble, les résultats obtenus sont comparables à ceux qu'on obtient sur des poêles et on peut donc conclure que la méthode proposée permet donc d'étendre le champ d'application de la Norme B-415 aux calorifères à bois.

# 8.0 CONCLUSION

On peut donc conclure que les travaux effectués dans ce contrat nous permettent de suggérer les modifications à apporter à la Norme B-415 actuelle pour l'appliquer aux calorifères à bois. Nous donnons, dans la section suivante, les modifications suggérées. (Cette section est en anglais pour être incorporée à la version anglaise de la norme. La version française de cette norme sera disponible plus tard).

# 9.0 SUGGESTED MODIFICATIONS TO DRAFT STANDARD B-415 (VERSION SEPTEMBER 1985)

## PREFACE AND SCOPE

This standard also applies to chunk wood fired warm air heating systems not exceeding 300 kW (Ref. B 366.1) and controlled by an ON/OFF house thermostat.

## 2.0 REFERENCE PUBLICATIONS (addition)

CSA B366.1 Solid-Fuel-Fired Appliances for Residential use.
CSA B140.0 General Requirements for oil burning equipment.
CSA B140.4 Oil-Fired Warm air Furnaces.

## 4.2 APPLIANCE INSTALLATION

4.2.1 to 4.2.4 No change.

4.2.5 (New). If required by the manufacturer, a barometric draft regulator should be installed on the flue pipe. It should be installed as far downstream as possible not to interfere with flue gas temperature measurements (See clause 5.3.2.1) and sampling.

4.2.6 (New). The draft regulator should be set to limit the draft to the maximum specified by the manufacturer.

4.2.7 (New). The appliance should be fitted with supply and return air plenums as specified in CSA B-140.4 (Clause 11).

## 5.3.1 AIR TEMPERATURE

5.3.1.2 (New). The cold and warm air temperature shall be measured in accordance with CSA B-140.4 (Clause 11).

## 5.3.2 FLUE GAS TEMPERATURE

5.3.2.1 (Modification). For warm-air furnace the thermocouples shall be located:

a) At a point 45 cm from the centre-line of the flue collar. A 90-degree elbow shall be used at the flue outlet. This procedure is for an appliance with a horizontal flue outlet.

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b) At a point 45 cm from the unit casing or outer jacket for units with vertical flue outlet. (B140.0 clause 14).

## 5.7 AIR FLOW RATE

5.7.1 (New). An air flow meter shall be fitted to the unit to measure continously the heated air flow rate. If such a transducer is not used, the air flow shall be determined for each fan speed and these values used as constant through-out the experiment (On unit with multiple fan speed an indication of fan speed is required).

## 7.0 TEST PROCEDURES

7.0 Appliance Set-Up (New).

7.0.1 On unit with adjustable fan speed, the air flow shall be adjusted not to exceed the maximum air temperature rise specified by the manufacturer at peak power with an external static pressure of 50 Pa (0,20 in water column).

7.0.2 The automatic fan control shall be set 130°F/Fan on and 100°F Fan/OFF.

7.1.5 (New). For appliances controlled by an ON/OFF-type house thermostat, the appliance shall be tested at maximum and minimum power output. For these two tests, the average (over the burn cycle) plenum power output shall be computed based on warm air flow rate and air temperature rise.

The appliance shall then be tested at two intermediate burn rates which shall be obtained by running the appliance at constant average plenum output. This can be achieved by using an automatic control (or computer) which continuously compute average output and actuates the air combustion damper (ON/-OFF) in order to keep the output at a preset value. The two values used shall be equally spaced between the maximum and minimum values obtained in the previous two tests.

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## 7.3 DATA COLLECTION

7.3.2 (Modification). For warm air furnace, data shall be recorded at intervals of weight change not exceeding 2,5% of the weight of the test charge. For the intermediate burn rates, one additonal data point should be taken every time the automatic control cycles the combustion control either ON or OFF.

7.3.3 (Modification). For warm air furnace, average power output shall also be recorded.

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# ANNEXE I

Photos

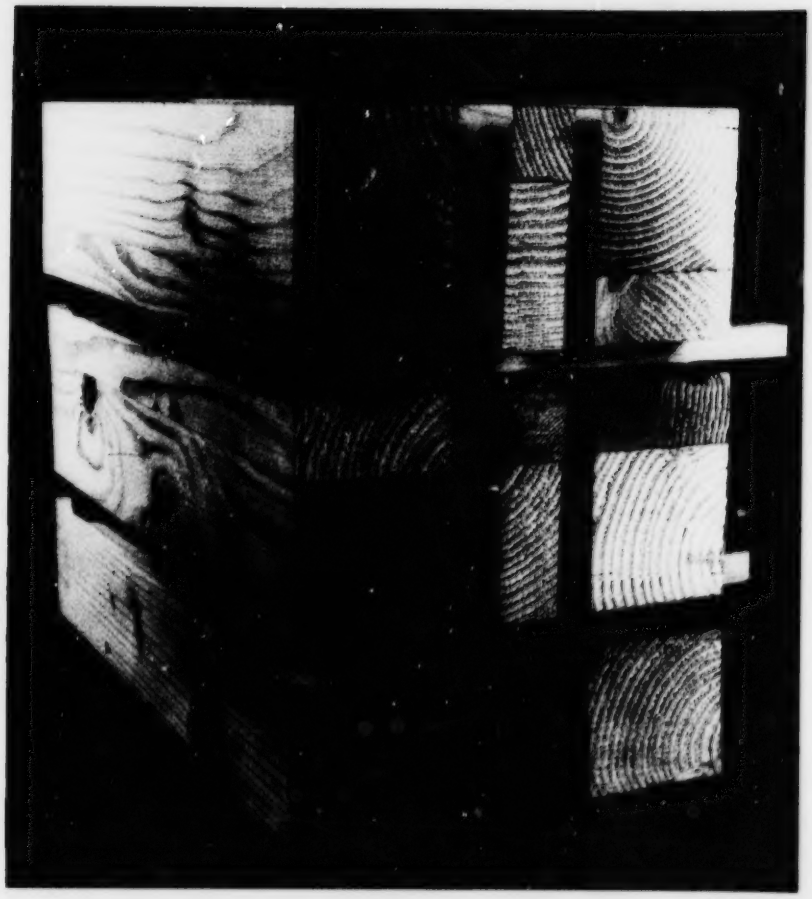


Photo 1

Charge standard

CRIQ

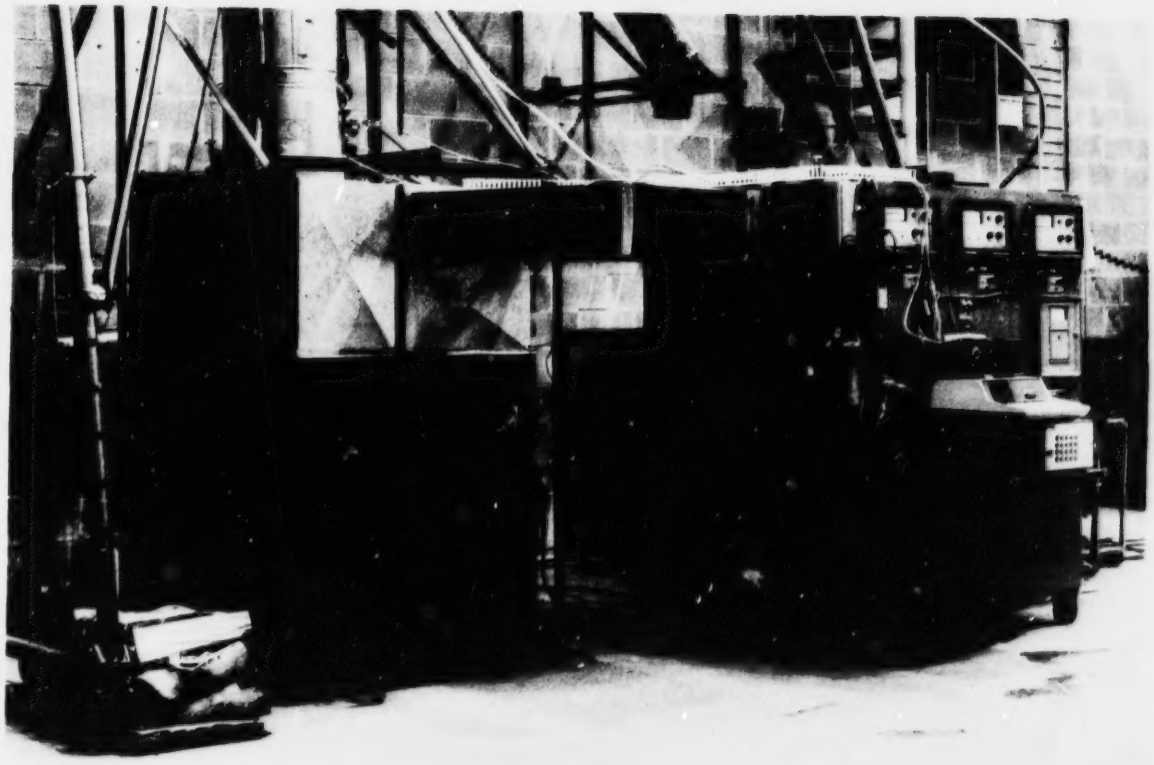


Photo 2

Vue générale: Séries no 1 et 2

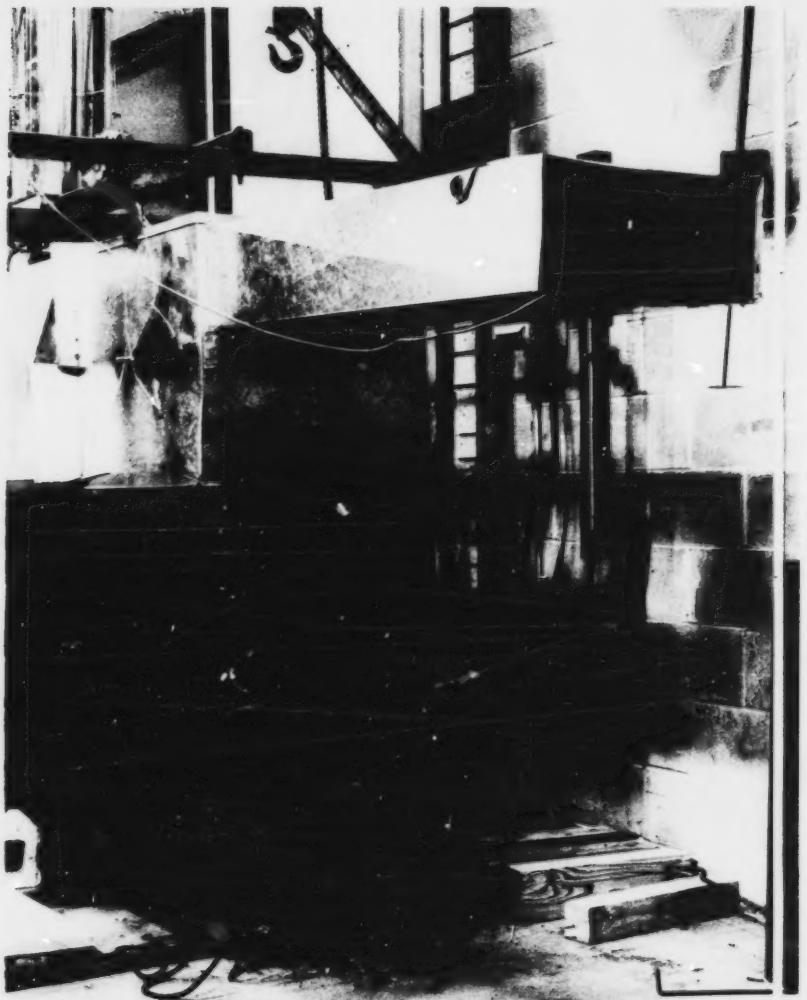


Photo 3

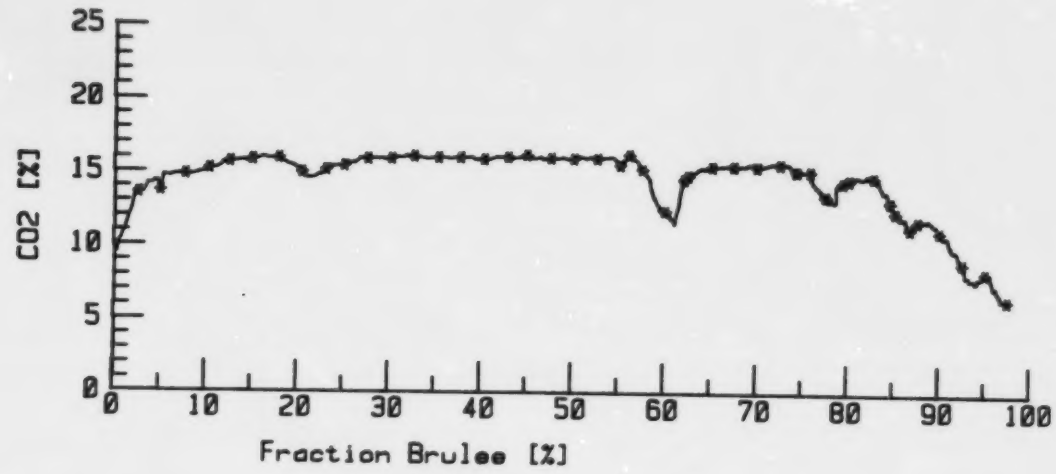
Vue générale: Série no 3

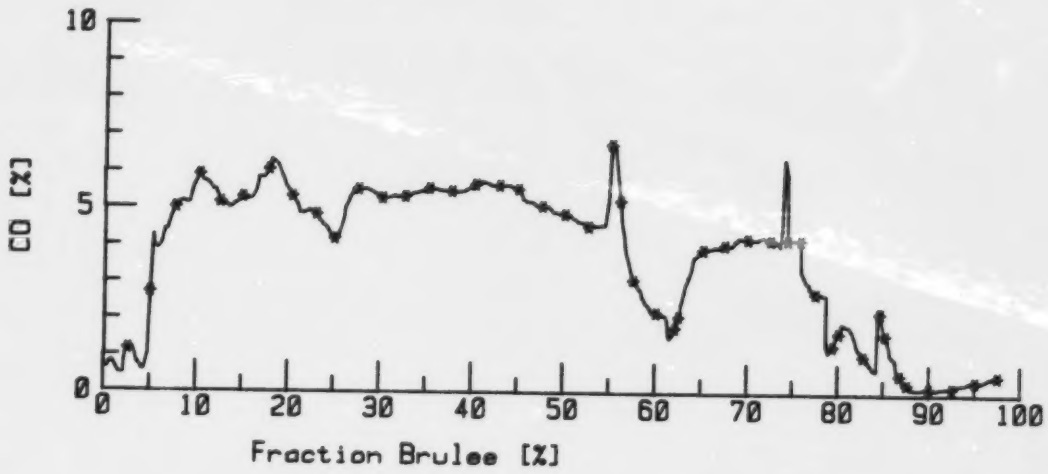
# ANNEXE II

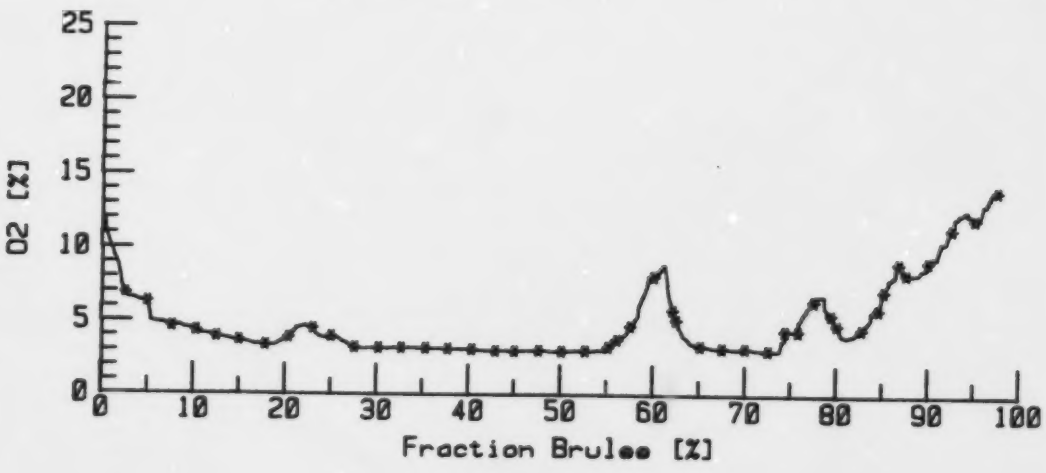
Fréquence d'échantillonnage

- Série no 2 -

CRIQ CENTRE DE RECHERCHE INDUSTRIELLE DU QUÉBEC




Fichier: 300913 Titre: 20KW-1
Intervalle de lecture [poids %]: 2.5
Nbre de lectures au changement d'etat: 1

MESURES

FICHIER: 300913
TITRE: 20KW-1
POIDS INITIAL (BASE HUMIDE)=20.30KG
HUMIDITE DU BOIS=17%
POIDS INTIAL (BASE SECHE)16.85KG
INTERVALLE DE LECTURE (%) 2.5
NBRE. DE LECTURES AU CHANGEMENT D'ETAT 1

| TEMPS MIN. | POIDS KG | T.CH. C | T.AMB C | CO2 % | CO % | O2 % |
|---|---|---|---|---|---|---|
| 3.4 | 19.76 | 138.0 | 23.3 | 13.53 | 1.16 | 6.85 |
| 5.6 | 19.28 | 174.0 | 23.1 | 13.69 | 2.71 | 6.30 |
| 7.6 | 18.72 | 194.3 | 23.7 | 14.81 | 5.01 | 4.61 |
| 9.2 | 18.20 | 200.9 | 23.9 | 15.20 | 5.90 | 4.33 |
| 10.4 | 17.74 | 206.0 | 24.1 | 15.68 | 5.16 | 3.93 |
| 11.7 | 17.24 | 212.7 | 22.8 | 15.83 | 5.29 | 3.68 |
| 13.2 | 16.66 | 219.3 | 23.1 | 15.95 | 6.04 | 3.36 |
| 14.4 | 16.15 | 223.0 | 22.6 | 14.99 | 5.33 | 3.87 |
| 15.9 | 15.61 | 228.1 | 23.1 | 15.15 | 4.84 | 4.50 |
| 17.2 | 15.21 | 231.6 | 23.0 | 15.44 | 4.18 | 3.96 |
| 18.7 | 14.69 | 238.7 | 22.4 | 15.91 | 5.51 | 3.21 |
| 20.2 | 14.16 | 238.4 | 22.5 | 15.94 | 5.28 | 3.17 |
| 21.7 | 13.66 | 237.1 | 22.5 | 16.09 | 5.33 | 3.18 |
| 23.2 | 13.12 | 236.8 | 23.1 | 16.01 | 5.54 | 3.17 |
| 24.7 | 12.63 | 237.4 | 23.6 | 16.02 | 5.46 | 3.13 |
| 26.3 | 12.10 | 238.8 | 23.4 | 15.89 | 5.64 | 3.08 |
| 27.8 | 11.57 | 238.7 | 23.4 | 16.04 | 5.63 | 2.99 |
| 29.0 | 11.15 | 237.3 | 23.6 | 16.18 | 5.53 | 2.97 |
| 30.8 | 10.62 | 235.4 | 23.0 | 15.98 | 5.07 | 3.02 |
| 32.6 | 10.11 | 233.6 | 22.9 | 15.95 | 4.85 | 2.97 |
| 34.3 | 9.60 | 232.3 | 23.4 | 15.97 | 4.52 | 3.01 |
| 36.1 | 9.09 | 232.0 | 23.6 | 15.54 | 6.76 | 3.27 |
| 36.8 | 8.89 | 229.4 | 23.6 | 16.25 | 5.22 | 3.76 |
| 38.6 | 8.60 | 201.8 | 22.0 | 15.27 | 3.08 | 4.70 |
| 42.6 | 8.09 | 156.5 | 22.6 | 12.40 | 2.19 | 8.08 |
| 46.4 | 7.68 | 130.1 | 22.7 | 14.60 | 1.78 | 5.81 |
| 46.9 | 7.60 | 133.2 | 23.1 | 14.82 | 2.09 | 5.13 |
| 49.6 | 7.07 | 168.3 | 21.5 | 15.45 | 3.91 | 3.36 |
| 51.9 | 6.58 | 189.7 | 23.1 | 15.48 | 4.04 | 3.22 |
| 54.4 | 6.08 | 205.1 | 23.3 | 15.46 | 4.21 | 3.22 |
| 56.4 | 5.57 | 212.9 | 22.9 | 15.64 | 4.17 | 3.06 |
| 58.9 | 5.19 | 216.3 | 23.0 | 15.16 | 4.18 | 4.40 |
| 59.7 | 4.90 | 205.9 | 22.6 | 15.16 | 4.18 | 4.40 |
| 64.6 | 4.55 | 152.1 | 21.9 | 13.47 | 2.74 | 6.44 |
| 68.8 | 4.16 | 127.9 | 21.2 | 14.41 | 1.31 | 5.51 |
| 69.6 | 4.03 | 135.8 | 22.1 | 14.58 | 1.67 | 4.84 |
| 74.9 | 3.49 | 199.6 | 22.5 | 14.78 | 1.04 | 4.55 |
| 79.6 | 3.12 | 211.0 | 22.7 | 13.10 | 2.21 | 5.88 |
| 81.2 | 3.00 | 187.8 | 22.3 | 12.39 | 1.62 | 7.13 |
| 88.2 | 2.67 | 124.5 | 22.6 | 11.30 | .53 | 9.03 |
| 90.5 | 2.51 | 138.0 | 22.9 | 11.81 | .29 | 8.33 |
| 100.3 | 2.02 | 169.8 | 22.3 | 11.09 | .19 | 9.15 |
| 113.6 | 1.50 | 159.1 | 23.4 | 8.96 | .19 | 11.39 |
| 129.8 | .99 | 139.7 | 24.2 | 8.32 | .37 | 12.09 |
| 149.6 | .49 | 124.9 | 24.8 | 6.47 | .52 | 14.00 |

RESULTATS (AVEC HC<0 CONSERVE)

TITRE: 20KW-1
FICHIER: 300913

| TEMPS MIN. | P.INI KG | P.FIN KG | INPUT MJ | OUTPUT MJ | CO gr | HC gr |
|---|---|---|---|---|---|---|
| 3.4 | 16.85 | 16.36 | 6.05 | 1.33 | 23 | 28 |
| 5.6 | 16.36 | 16.03 | 4.30 | .62 | 55 | 55 |
| 7.6 | 16.03 | 15.67 | 4.71 | .41 | 107 | 91 |
| 9.2 | 15.67 | 15.33 | 4.50 | .29 | 160 | 131 |
| 10.4 | 15.33 | 15.00 | 4.52 | .50 | 208 | 169 |
| 11.7 | 15.00 | 14.62 | 5.32 | .66 | 265 | 216 |
| 13.2 | 14.62 | 14.23 | 5.63 | .67 | 330 | 267 |
| 14.4 | 14.23 | 13.84 | 5.61 | .99 | 395 | 313 |
| 15.9 | 13.84 | 13.49 | 5.19 | .86 | 448 | 359 |
| 17.2 | 13.49 | 13.14 | 5.21 | 1.18 | 496 | 401 |
| 18.7 | 13.14 | 12.73 | 6.10 | 1.20 | 563 | 453 |
| 20.2 | 12.73 | 12.33 | 6.19 | 1.39 | 629 | 504 |
| 21.7 | 12.33 | 11.92 | 6.41 | 1.49 | 697 | 557 |
| 23.2 | 11.92 | 11.51 | 6.51 | 1.61 | 769 | 610 |
| 24.7 | 11.51 | 11.09 | 6.63 | 1.80 | 841 | 663 |
| 26.3 | 11.09 | 10.66 | 7.04 | 2.06 | 920 | 715 |
| 27.8 | 10.66 | 10.26 | 6.45 | 2.02 | 993 | 762 |
| 29.0 | 10.26 | 9.87 | 6.62 | 2.19 | 1066 | 808 |
| 30.8 | 9.87 | 9.43 | 7.43 | 2.85 | 1145 | 854 |
| 32.6 | 9.43 | 8.99 | 7.50 | 3.16 | 1225 | 895 |
| 34.3 | 8.99 | 8.55 | 7.72 | 3.55 | 1304 | 934 |
| 36.1 | 8.55 | 8.25 | 5.46 | 2.10 | 1376 | 967 |
| 36.8 | 8.25 | 8.03 | 3.81 | 1.52 | 1417 | 991 |
| 38.6 | 8.03 | 7.68 | 6.36 | 3.31 | 1466 | 1021 |
| 42.6 | 7.68 | 7.28 | 7.62 | 4.14 | 1520 | 1055 |
| 46.4 | 7.28 | 7.06 | 4.19 | 2.67 | 1542 | 1070 |
| 46.9 | 7.06 | 6.78 | 5.19 | 3.42 | 1574 | 1084 |
| 49.6 | 6.78 | 6.33 | 8.89 | 5.68 | 1664 | 1105 |
| 51.9 | 6.33 | 5.89 | 8.99 | 5.86 | 1760 | 1123 |
| 54.4 | 5.89 | 5.43 | 9.60 | 6.29 | 1867 | 1141 |
| 56.4 | 5.43 | 5.02 | 8.70 | 5.84 | 1964 | 1155 |
| 58.9 | 5.02 | 4.72 | 6.74 | 4.09 | 2037 | 1175 |
| 59.7 | 4.72 | 4.43 | 6.61 | 4.08 | 2110 | 1195 |
| 64.6 | 4.43 | 4.09 | 7.83 | 5.42 | 2180 | 1212 |
| 68.8 | 4.09 | 3.85 | 5.72 | 4.88 | 2207 | 1212 |
| 69.6 | 3.85 | 3.54 | 7.57 | 6.64 | 2253 | 1207 |
| 74.9 | 3.54 | 3.11 | 10.72 | 10.13 | 2297 | 1183 |
| 79.6 | 3.11 | 2.89 | 5.92 | 5.02 | 2349 | 1175 |
| 81.2 | 2.89 | 2.68 | 5.47 | 4.66 | 2387 | 1170 |
| 88.2 | 2.68 | 2.45 | 6.25 | 5.69 | 2404 | 1166 |
| 90.5 | 2.45 | 2.14 | 8.45 | 8.26 | 2417 | 1150 |
| 100.3 | 2.14 | 1.67 | 13.71 | 13.19 | 2431 | 1125 |
| 113.6 | 1.67 | 1.18 | 14.77 | 14.03 | 2452 | 1098 |
| 129.8 | 1.18 | .71 | 15.31 | 13.92 | 2494 | 1084 |
| 149.6 | .71 | 0.00 | 23.84 | 20.27 | 2606 | 1081 |

RESULTATS (AVEC HC<0 CONSERVE)

FICHIER: 300913 20KW-1
NOMBRE DE POINTS DE MESURE= 45

MESURES DE CHEMINEE (100% CHARGE BRULEE)

POIDS SEC= 16.8 KG
DUREE =180 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
2606 grammes
13.6 g/MJ
869 g/Hre

HYDROCARBURES :
1081 grammes
5.6 g/MJ
360 g/Hre

INPUT : 333 MJ

OUTPUT : 192 MJ

PUISSANCE: 64 MJ/Hre

RENDEMENT:57.6 %

MESURES DE CHEMINEE (90.1% CHARGE BRULEE)

POIDS SEC= 15.2 KG
DUREE =107 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
2431 grammes
16.9 g/MJ
1365 g/Hre

HYDROCARBURES :
1125 grammes
7.8 g/MJ
631 g/Hre

INPUT : 279 MJ

OUTPUT : 144 MJ

PUISSANCE: 81 MJ/Hre

RENDEMENT:51.4 %

MESURES AU PLENUM

| | | |
|---|---|---|
| FRACTION BRULEE | 95.8 % | 90.1 % |
| DUREE | 140 MIN | 107 MIN |
| DELTA T MOYEN | 28 C | 29 C |
| INPUT | 310 MJ | 279 MJ |
| OUTPUT | 157 MJ | 126 MJ |
| PUISSANCE: | 68 MJ/H | 71 MJ/H |
| RENDEMENT | 51 % | 45 % |

RESULTATS (AVEC HC<0 ELIMINE)

TITRE: 20KW-1
FICHIER: 300913

| TEMPS MIN. | P.INI KG | P.FIN KG | INPUT MJ | OUTPUT MJ | CO gr | HC gr |
|---|---|---|---|---|---|---|
| 3.4 | 16.85 | 16.36 | 6.05 | 1.33 | 23 | 28 |
| 5.6 | 16.36 | 16.03 | 4.30 | .62 | 55 | 55 |
| 7.6 | 16.03 | 15.67 | 4.71 | .41 | 107 | 91 |
| 9.2 | 15.67 | 15.33 | 4.50 | .29 | 160 | 131 |
| 10.4 | 15.33 | 15.00 | 4.52 | .50 | 208 | 169 |
| 11.7 | 15.00 | 14.62 | 5.32 | .66 | 265 | 216 |
| 13.2 | 14.62 | 14.23 | 5.63 | .67 | 330 | 267 |
| 14.4 | 14.23 | 13.84 | 5.61 | .99 | 395 | 313 |
| 15.9 | 13.84 | 13.49 | 5.19 | .86 | 448 | 359 |
| 17.2 | 13.49 | 13.14 | 5.21 | 1.18 | 496 | 401 |
| 18.7 | 13.14 | 12.73 | 6.10 | 1.20 | 563 | 453 |
| 20.2 | 12.73 | 12.33 | 6.19 | 1.39 | 629 | 504 |
| 21.7 | 12.33 | 11.92 | 6.41 | 1.49 | 697 | 557 |
| 23.2 | 11.92 | 11.51 | 6.51 | 1.61 | 769 | 610 |
| 24.7 | 11.51 | 11.09 | 6.63 | 1.80 | 841 | 663 |
| 26.3 | 11.09 | 10.66 | 7.04 | 2.06 | 920 | 715 |
| 27.8 | 10.66 | 10.26 | 6.45 | 2.02 | 993 | 762 |
| 29.0 | 10.26 | 9.87 | 6.62 | 2.19 | 1066 | 808 |
| 30.8 | 9.87 | 9.43 | 7.43 | 2.85 | 1145 | 854 |
| 32.6 | 9.43 | 8.99 | 7.50 | 3.16 | 1225 | 895 |
| 34.3 | 8.99 | 8.55 | 7.72 | 3.55 | 1304 | 934 |
| 36.1 | 8.55 | 8.25 | 5.46 | 2.10 | 1376 | 967 |
| 36.8 | 8.25 | 8.03 | 3.81 | 1.52 | 1417 | 991 |
| 38.6 | 8.03 | 7.68 | 6.36 | 3.31 | 1466 | 1021 |
| 42.6 | 7.68 | 7.28 | 7.62 | 4.14 | 1520 | 1055 |
| 46.4 | 7.28 | 7.06 | 4.19 | 2.67 | 1542 | 1070 |
| 46.9 | 7.06 | 6.78 | 5.19 | 3.42 | 1574 | 1084 |
| 49.6 | 6.78 | 6.33 | 8.89 | 5.68 | 1664 | 1105 |
| 51.9 | 6.33 | 5.89 | 8.99 | 5.86 | 1760 | 1123 |
| 54.4 | 5.89 | 5.43 | 9.60 | 6.29 | 1867 | 1141 |
| 56.4 | 5.43 | 5.02 | 8.70 | 5.84 | 1964 | 1155 |
| 58.9 | 5.02 | 4.72 | 6.74 | 4.09 | 2037 | 1175 |
| 59.7 | 4.72 | 4.43 | 6.61 | 4.08 | 2110 | 1195 |
| 64.6 | 4.43 | 4.09 | 7.83 | 5.42 | 2180 | 1212 |
| 68.8 | 4.09 | 3.85 | 5.72 | 4.88 | 2207 | 1212 |
| 69.6 | 3.85 | 3.54 | 7.57 | 6.32 | 2253 | 1212 |
| 74.9 | 3.54 | 3.11 | 10.72 | 8.77 | 2297 | 1212 |
| 79.6 | 3.11 | 2.89 | 5.92 | 4.59 | 2349 | 1212 |
| 81.2 | 2.89 | 2.68 | 5.47 | 4.39 | 2387 | 1212 |
| 88.2 | 2.68 | 2.45 | 6.25 | 5.47 | 2404 | 1212 |
| 90.5 | 2.45 | 2.14 | 8.45 | 7.38 | 2417 | 1212 |
| 100.3 | 2.14 | 1.67 | 13.71 | 11.75 | 2431 | 1212 |
| 113.6 | 1.67 | 1.18 | 14.77 | 12.53 | 2452 | 1212 |
| 129.8 | 1.18 | .71 | 15.31 | 13.14 | 2494 | 1212 |
| 149.6 | .71 | 0.00 | 23.84 | 20.11 | 2606 | 1212 |

RESULTATS (AVEC HC<0 ELIMINE)

FICHIER: 300913 20KW-1
NOMBRE DE POINTS DE MESURE= 45

MESURES DE CHEMINEE (100% CHARGE BRULEE)

POIDS SEC= 16.8 KG
DUREE =180 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
2606 grammes
14.1 g/MJ
869 g/Hre

HYDROCARBURES :
1212 grammes
6.6 g/MJ
404 g/Hre

INPUT : 333 MJ

OUTPUT : 185 MJ

PUISSANCE: 62 MJ/Hre

RENDEMENT:55.4 %

MESURES DE CHEMINEE (90.1% CHARGE BRULEE)

POIDS SEC= 15.2 KG
DUREE =107 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
2431 grammes
17.5 g/MJ
1365 g/Hre

HYDROCARBURES :
1212 grammes
8.7 g/MJ
681 g/Hre

INPUT : 279 MJ

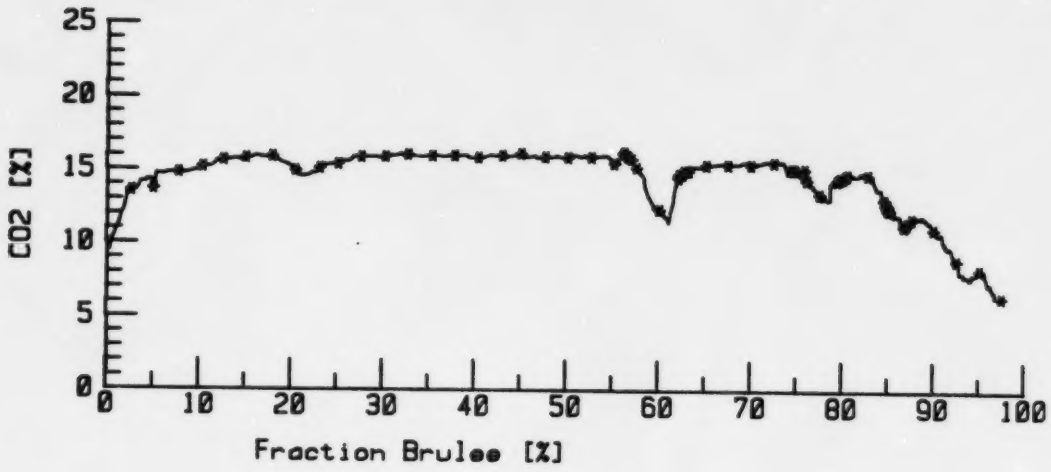
OUTPUT : 139 MJ

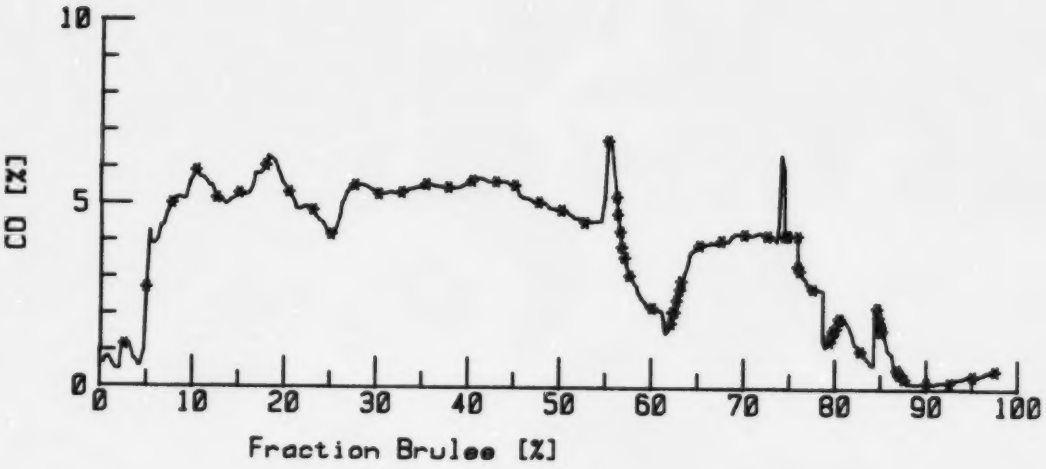
PUISSANCE: 78 MJ/Hre

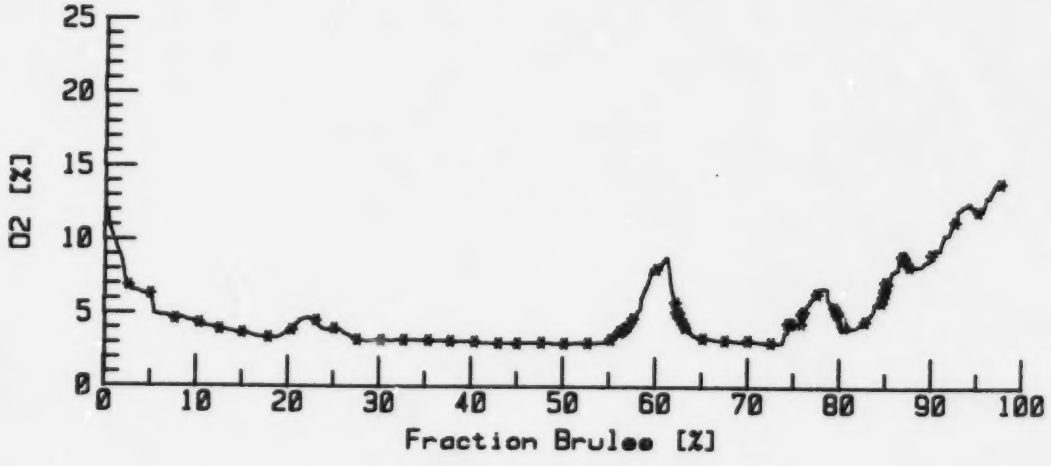
RENDEMENT:49.7 %

MESURES AU PLENUM

| | | |
|---|---|---|
| FRACTION BRULEE | 95.8 % | 90.1 % |
| DUREE | 140 MIN | 107 MIN |
| DELTA T MOYEN | 28 C | 29 C |
| INPUT | 310 MJ | 279 MJ |
| OUTPUT | 157 MJ | 126 MJ |
| PUISSANCE: | 68 MJ/H | 71 MJ/H |
| RENDEMENT | 51 % | 45 % |




Fichier: 300913 Titre: 20KW-1
Intervalle de lecture [poids %]: 2.5
Nbre de lectures au changement d'etat: 5

# MESURES

FICHIER: 300913
TITRE: 20KW-1
POIDS INITIAL (BASE HUMIDE)=20.30KG
HUMIDITE DU BOIS=17%
POIDS INTIAL (BASE SECHE)16.85KG
INTERVALLE DE LECTURE [%] 2.5
NBRE. DE LECTURES AU CHANGEMENT D'ETAT 5

| TEMPS MIN. | POIDS KG | T.CH. C | T.AMB C | CO2 % | CO % | O2 % |
|---|---|---|---|---|---|---|
| 3.4 | 19.76 | 138.0 | 23.3 | 13.53 | 1.16 | 6.85 |
| 5.6 | 19.28 | 174.0 | 23.1 | 13.69 | 2.71 | 6.30 |
| 7.6 | 18.72 | 194.3 | 23.7 | 14.81 | 5.01 | 4.61 |
| 9.2 | 18.20 | 200.9 | 23.9 | 15.20 | 5.90 | 4.33 |
| 10.4 | 17.74 | 206.0 | 24.1 | 15.68 | 5.16 | 3.93 |
| 11.7 | 17.24 | 212.7 | 22.8 | 15.83 | 5.29 | 3.68 |
| 13.2 | 16.66 | 219.3 | 23.1 | 15.95 | 6.04 | 3.36 |
| 14.4 | 16.15 | 223.0 | 22.6 | 14.99 | 5.33 | 3.87 |
| 15.9 | 15.61 | 228.1 | 23.1 | 15.15 | 4.84 | 4.50 |
| 17.2 | 15.21 | 231.6 | 23.0 | 15.44 | 4.18 | 3.96 |
| 18.7 | 14.69 | 238.7 | 22.4 | 15.91 | 5.51 | 3.21 |
| 20.2 | 14.16 | 238.4 | 22.5 | 15.94 | 5.28 | 3.17 |
| 21.7 | 13.66 | 237.1 | 22.5 | 16.09 | 5.33 | 3.18 |
| 23.2 | 13.12 | 236.8 | 23.1 | 16.01 | 5.54 | 3.17 |
| 24.7 | 12.63 | 237.4 | 23.6 | 16.02 | 5.46 | 3.13 |
| 26.3 | 12.10 | 238.8 | 23.4 | 15.89 | 5.64 | 3.08 |
| 27.8 | 11.57 | 238.7 | 23.4 | 16.04 | 5.63 | 2.99 |
| 29.0 | 11.15 | 237.3 | 23.6 | 16.18 | 5.53 | 2.97 |
| 30.8 | 10.62 | 235.4 | 23.0 | 15.98 | 5.07 | 3.02 |
| 32.6 | 10.11 | 233.6 | 22.9 | 15.95 | 4.85 | 2.97 |
| 34.3 | 9.60 | 232.3 | 23.4 | 15.97 | 4.52 | 3.01 |
| 36.1 | 9.09 | 232.0 | 23.6 | 15.54 | 6.76 | 3.27 |
| 36.8 | 8.89 | 229.4 | 23.6 | 16.25 | 5.22 | 3.76 |
| 37.1 | 8.87 | 225.9 | 23.2 | 16.31 | 4.75 | 3.82 |
| 37.3 | 8.81 | 221.9 | 22.7 | 16.09 | 4.28 | 3.89 |
| 37.6 | 8.78 | 217.8 | 22.4 | 15.98 | 3.85 | 4.02 |
| 37.8 | 8.71 | 213.6 | 22.3 | 15.85 | 3.57 | 4.16 |
| 38.6 | 8.60 | 201.8 | 22.0 | 15.27 | 3.08 | 4.70 |
| 42.6 | 8.09 | 156.5 | 22.6 | 12.40 | 2.19 | 8.08 |
| 46.4 | 7.68 | 130.1 | 22.7 | 14.60 | 1.78 | 5.81 |
| 46.6 | 7.66 | 131.4 | 22.9 | 14.82 | 2.09 | 5.13 |
| 46.9 | 7.60 | 133.2 | 23.1 | 14.82 | 2.09 | 5.13 |
| 47.1 | 7.56 | 135.6 | 23.2 | 15.03 | 2.41 | 4.67 |
| 47.4 | 7.49 | 138.4 | 23.3 | 15.05 | 2.71 | 4.36 |
| 47.6 | 7.46 | 141.7 | 23.4 | 15.07 | 2.93 | 4.10 |
| 49.6 | 7.07 | 168.3 | 21.5 | 15.45 | 3.91 | 3.36 |
| 51.9 | 6.58 | 189.7 | 23.1 | 15.48 | 4.04 | 3.22 |
| 54.4 | 6.08 | 205.1 | 23.3 | 15.46 | 4.21 | 3.22 |
| 56.4 | 5.57 | 212.9 | 22.9 | 15.64 | 4.17 | 3.06 |
| 58.9 | 5.19 | 216.3 | 23.0 | 15.16 | 4.18 | 4.40 |
| 59.2 | 5.15 | 213.1 | 23.1 | 15.16 | 4.18 | 4.40 |
| 59.4 | 5.11 | 209.6 | 22.7 | 15.16 | 4.18 | 4.40 |
| 59.7 | 4.90 | 205.9 | 22.6 | 15.16 | 4.18 | 4.40 |
| 61.3 | 4.89 | 183.5 | 22.1 | 14.76 | 3.34 | 5.06 |
| 61.6 | 4.84 | 180.6 | 21.8 | 14.44 | 3.23 | 5.20 |
| 64.6 | 4.55 | 152.1 | 21.9 | 13.47 | 2.74 | 6.44 |
| 68.8 | 4.16 | 127.9 | 21.2 | 14.41 | 1.31 | 5.51 |
| 69.1 | 4.12 | 130.2 | 21.6 | 14.49 | 1.46 | 5.28 |
| 69.3 | 4.11 | 132.6 | 21.8 | 14.53 | 1.60 | 5.06 |
| 69.6 | 4.03 | 135.8 | 22.1 | 14.58 | 1.67 | 4.84 |
| 70.1 | 3.97 | 142.9 | 22.4 | 14.73 | 1.93 | 4.28 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 70.4 | 3.94 | 146.4 | 22.5 | 14.79 | 1.91 | 4.20 |
| 74.9 | 3.49 | 199.6 | 22.5 | 14.78 | 1.04 | 4.55 |
| 79.6 | 3.12 | 211.0 | 22.7 | 13.10 | 2.21 | 5.88 |
| 79.9 | 3.09 | 207.2 | 22.7 | 12.78 | 1.98 | 6.27 |
| 80.4 | 3.06 | 199.3 | 22.6 | 12.75 | 1.83 | 6.62 |
| 80.7 | 3.05 | 195.3 | 22.5 | 12.61 | 1.72 | 6.77 |
| 81.2 | 3.00 | 187.8 | 22.3 | 12.39 | 1.62 | 7.13 |
| 81.4 | 3.04 | 184.2 | 21.9 | 12.43 | 1.57 | 7.24 |
| 88.2 | 2.67 | 124.5 | 22.6 | 11.30 | .53 | 9.03 |
| 88.4 | 2.67 | 125.6 | 22.8 | 11.30 | .53 | 9.03 |
| 88.7 | 2.65 | 126.8 | 22.9 | 11.39 | .50 | 8.98 |
| 89.2 | 2.63 | 130.1 | 23.0 | 11.45 | .44 | 8.90 |
| 89.4 | 2.62 | 131.7 | 22.8 | 11.48 | .42 | 8.82 |
| 90.5 | 2.51 | 138.0 | 22.9 | 11.81 | .29 | 8.33 |
| 100.3 | 2.02 | 169.8 | 22.3 | 11.09 | .19 | 9.15 |
| 113.6 | 1.50 | 159.1 | 23.4 | 8.96 | .19 | 11.39 |
| 129.8 | .99 | 139.7 | 24.2 | 8.32 | .37 | 12.09 |
| 149.6 | .49 | 124.9 | 24.8 | 6.47 | .52 | 14.00 |

RESULTATS (AVEC HC<0 CONSERVE)

TITRE: 20KW-1
FICHIER: 300913

| TEMPS MIN. | P.INI KG | P.FIN KG | INPUT MJ | OUTPUT MJ | CO gr | HC gr |
|---|---|---|---|---|---|---|
| 3.4 | 16.85 | 16.36 | 6.05 | 1.33 | 23 | 28 |
| 5.6 | 16.36 | 16.03 | 4.30 | .62 | 55 | 55 |
| 7.6 | 16.03 | 15.67 | 4.71 | .41 | 107 | 91 |
| 9.2 | 15.67 | 15.33 | 4.50 | .29 | 160 | 131 |
| 10.4 | 15.33 | 15.00 | 4.52 | .50 | 208 | 169 |
| 11.7 | 15.00 | 14.62 | 5.32 | .66 | 265 | 216 |
| 13.2 | 14.62 | 14.23 | 5.63 | .67 | 330 | 267 |
| 14.4 | 14.23 | 13.84 | 5.61 | .99 | 395 | 313 |
| 15.9 | 13.84 | 13.49 | 5.19 | .86 | 448 | 359 |
| 17.2 | 13.49 | 13.14 | 5.21 | 1.18 | 496 | 401 |
| 18.7 | 13.14 | 12.73 | 6.10 | 1.20 | 563 | 453 |
| 20.2 | 12.73 | 12.33 | 6.19 | 1.39 | 629 | 504 |
| 21.7 | 12.33 | 11.92 | 6.41 | 1.49 | 697 | 557 |
| 23.2 | 11.92 | 11.51 | 6.51 | 1.61 | 769 | 610 |
| 24.7 | 11.51 | 11.09 | 6.63 | 1.80 | 841 | 663 |
| 26.3 | 11.09 | 10.66 | 7.04 | 2.06 | 920 | 715 |
| 27.8 | 10.66 | 10.26 | 6.45 | 2.02 | 993 | 762 |
| 29.0 | 10.26 | 9.87 | 6.62 | 2.19 | 1066 | 808 |
| 30.8 | 9.87 | 9.43 | 7.43 | 2.85 | 1145 | 854 |
| 32.6 | 9.43 | 8.99 | 7.50 | 3.16 | 1225 | 895 |
| 34.3 | 8.99 | 8.55 | 7.72 | 3.55 | 1304 | 934 |
| 36.1 | 8.55 | 8.25 | 5.46 | 2.10 | 1376 | 967 |
| 36.8 | 8.25 | 8.15 | 1.72 | .69 | 1395 | 978 |
| 37.1 | 8.15 | 8.12 | .63 | .26 | 1401 | 982 |
| 37.3 | 8.12 | 8.07 | .74 | .33 | 1408 | 986 |
| 37.6 | 8.07 | 8.03 | .78 | .37 | 1414 | 990 |
| 37.8 | 8.03 | 7.96 | 1.37 | .66 | 1426 | 997 |
| 38.6 | 7.96 | 7.68 | 4.94 | 2.57 | 1465 | 1020 |
| 42.6 | 7.68 | 7.28 | 7.62 | 4.14 | 1518 | 1055 |
| 46.4 | 7.28 | 7.08 | 3.68 | 2.34 | 1537 | 1067 |
| 46.6 | 7.08 | 7.05 | .68 | .45 | 1542 | 1069 |
| 46.9 | 7.05 | 7.00 | .85 | .56 | 1547 | 1072 |
| 47.1 | 7.00 | 6.96 | .88 | .58 | 1553 | 1074 |
| 47.4 | 6.96 | 6.91 | .85 | .57 | 1559 | 1076 |
| 47.6 | 6.91 | 6.72 | 3.66 | 2.45 | 1590 | 1084 |
| 49.6 | 6.72 | 6.33 | 7.67 | 4.90 | 1668 | 1102 |
| 51.9 | 6.33 | 5.89 | 8.99 | 5.86 | 1764 | 1119 |
| 54.4 | 5.89 | 5.43 | 9.60 | 6.29 | 1870 | 1137 |
| 56.4 | 5.43 | 5.02 | 8.70 | 5.84 | 1967 | 1151 |
| 58.9 | 5.02 | 4.83 | 4.24 | 2.57 | 2013 | 1164 |
| 59.2 | 4.83 | 4.80 | .81 | .49 | 2022 | 1167 |
| 59.4 | 4.80 | 4.68 | 2.52 | 1.54 | 2050 | 1175 |
| 59.7 | 4.68 | 4.58 | 2.28 | 1.41 | 2075 | 1181 |
| 61.3 | 4.58 | 4.55 | .61 | .40 | 2081 | 1183 |
| 61.6 | 4.55 | 4.40 | 3.52 | 2.37 | 2115 | 1191 |
| 64.6 | 4.40 | 4.09 | 7.20 | 4.99 | 2179 | 1206 |
| 68.8 | 4.09 | 3.89 | 4.75 | 4.05 | 2201 | 1207 |
| 69.1 | 3.89 | 3.86 | .66 | .56 | 2205 | 1206 |
| 69.3 | 3.86 | 3.82 | .98 | .84 | 2211 | 1206 |
| 69.6 | 3.82 | 3.76 | 1.54 | 1.35 | 2220 | 1205 |
| 70.1 | 3.76 | 3.72 | 1.00 | .90 | 2227 | 1204 |
| 70.4 | 3.72 | 3.49 | 5.41 | 4.88 | 2264 | 1195 |
| 74.9 | 3.49 | 3.11 | 9.68 | 9.14 | 2303 | 1174 |
| 79.6 | 3.11 | 2.93 | 4.90 | 4.16 | 2347 | 1167 |
| 79.9 | 2.93 | 2.90 | .71 | .61 | 2352 | 1166 |
| 80.4 | 2.90 | 2.88 | .45 | .38 | 2356 | 1166 |
| 80.7 | 2.88 | 2.85 | .72 | .61 | 2361 | 1165 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 81.2 | 2.85 | 2.85 | .17 | .14 | 2362 | 1165 |
| 81.4 | 2.85 | 2.69 | 4.02 | 3.38 | 2389 | 1163 |
| 88.2 | 2.69 | 2.52 | 4.63 | 4.22 | 2402 | 1160 |
| 88.4 | 2.52 | 2.51 | .26 | .23 | 2402 | 1160 |
| 88.7 | 2.51 | 2.49 | .58 | .52 | 2404 | 1159 |
| 89.2 | 2.49 | 2.48 | .38 | .35 | 2405 | 1159 |
| 89.4 | 2.48 | 2.43 | 1.47 | 1.36 | 2408 | 1158 |
| 90.5 | 2.43 | 2.14 | 7.81 | 7.63 | 2420 | 1143 |
| 100.3 | 2.14 | 1.67 | 13.71 | 13.19 | 2434 | 1117 |
| 113.6 | 1.67 | 1.18 | 14.77 | 14.03 | 2455 | 1091 |
| 129.8 | 1.18 | .71 | 15.31 | 13.92 | 2497 | 1077 |
| 149.6 | .71 | 0.00 | 23.84 | 20.27 | 2609 | 1074 |

RESULTATS (AVEC HC<0 CONSERVE)

FICHIER: 300913 20KW-1
NOMBRE DE POINTS DE MESURE= 69

MESURES DE CHEMINEE (100% CHARGE BRULEE)

POIDS SEC= 16.8 KG
DUREE =180 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
2609 grammes
13.6 g/MJ
870 g/Hre

HYDROCARBURES :
1074 grammes
5.6 g/MJ
358 g/Hre

INPUT : 333 MJ

OUTPUT : 192 MJ

PUISSANCE: 64 MJ/Hre

RENDEMENT:57.7 %

MESURES DE CHEMINEE (90.1% CHARGE BRULEE)

POIDS SEC= 15.2 KG
DUREE =107 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
2434 grammes
16.9 g/MJ
1366 g/Hre

HYDROCARBURES :
1117 grammes
7.8 g/MJ
627 g/Hre

INPUT : 279 MJ

OUTPUT : 144 MJ

PUISSANCE: 81 MJ/Hre

RENDEMENT:51.6 %

MESURES AU PLENUM

| | | |
|---|---|---|
| FRACTION BRULEE | 95.8 % | 90.1 % |
| DUREE | 140 MIN | 107 MIN |
| DELTA T MOYEN | 28 C | 29 C |
| INPUT | 310 MJ | 279 MJ |
| OUTPUT | 157 MJ | 126 MJ |
| PUISSANCE: | 68 MJ/H | 71 MJ/H |
| RENDEMENT | 51 % | 45 % |

RESULTATS (AVEC HC<0 ELIMINE)

TITRE: 20KW-1
FICHIER: 300913

| TEMPS MIN. | P.INI KG | P.FIN KG | INPUT MJ | OUTPUT MJ | CO gr | HC gr |
|---|---|---|---|---|---|---|
| 3.4 | 16.85 | 16.36 | 6.05 | 1.33 | 23 | 28 |
| 5.6 | 16.36 | 16.03 | 4.30 | .62 | 55 | 55 |
| 7.6 | 16.03 | 15.67 | 4.71 | .41 | 107 | 91 |
| 9.2 | 15.67 | 15.33 | 4.50 | .29 | 160 | 131 |
| 10.4 | 15.33 | 15.00 | 4.52 | .50 | 208 | 169 |
| 11.7 | 15.00 | 14.62 | 5.32 | .66 | 265 | 216 |
| 13.2 | 14.62 | 14.23 | 5.63 | .67 | 330 | 267 |
| 14.4 | 14.23 | 13.84 | 5.61 | .99 | 395 | 313 |
| 15.9 | 13.84 | 13.49 | 5.19 | .86 | 448 | 359 |
| 17.2 | 13.49 | 13.14 | 5.21 | 1.18 | 496 | 401 |
| 18.7 | 13.14 | 12.73 | 6.10 | 1.20 | 563 | 453 |
| 20.2 | 12.73 | 12.33 | 6.19 | 1.39 | 629 | 504 |
| 21.7 | 12.33 | 11.92 | 6.41 | 1.49 | 697 | 557 |
| 23.2 | 11.92 | 11.51 | 6.51 | 1.61 | 769 | 610 |
| 24.7 | 11.51 | 11.09 | 6.63 | 1.80 | 841 | 663 |
| 26.3 | 11.09 | 10.66 | 7.04 | 2.06 | 920 | 715 |
| 27.8 | 10.66 | 10.26 | 6.45 | 2.02 | 993 | 762 |
| 29.0 | 10.26 | 9.87 | 6.62 | 2.19 | 1066 | 808 |
| 30.8 | 9.87 | 9.43 | 7.43 | 2.85 | 1145 | 854 |
| 32.6 | 9.43 | 8.99 | 7.50 | 3.16 | 1225 | 895 |
| 34.3 | 8.99 | 8.55 | 7.72 | 3.55 | 1304 | 934 |
| 36.1 | 8.55 | 8.25 | 5.46 | 2.10 | 1376 | 967 |
| 36.8 | 8.25 | 8.15 | 1.72 | .69 | 1395 | 978 |
| 37.1 | 8.15 | 8.12 | .63 | .26 | 1401 | 982 |
| 37.3 | 8.12 | 8.07 | .74 | .33 | 1408 | 986 |
| 37.6 | 8.07 | 8.03 | .78 | .37 | 1414 | 990 |
| 37.8 | 8.03 | 7.96 | 1.37 | .66 | 1426 | 997 |
| 38.8 | 7.96 | 7.68 | 4.94 | 2.57 | 1465 | 1020 |
| 42.6 | 7.68 | 7.28 | 7.62 | 4.14 | 1518 | 1055 |
| 46.4 | 7.28 | 7.08 | 3.68 | 2.34 | 1537 | 1067 |
| 46.6 | 7.08 | 7.05 | .68 | .45 | 1542 | 1069 |
| 46.9 | 7.05 | 7.00 | .85 | .56 | 1547 | 1072 |
| 47.1 | 7.00 | 6.96 | .88 | .58 | 1553 | 1074 |
| 47.4 | 6.96 | 6.91 | .85 | .57 | 1559 | 1076 |
| 47.6 | 6.91 | 6.72 | 3.66 | 2.45 | 1590 | 1084 |
| 49.6 | 6.72 | 6.33 | 7.67 | 4.90 | 1668 | 1102 |
| 51.9 | 6.33 | 5.89 | 8.99 | 5.86 | 1764 | 1119 |
| 54.4 | 5.89 | 5.43 | 9.60 | 6.29 | 1870 | 1137 |
| 56.4 | 5.43 | 5.02 | 8.70 | 5.84 | 1967 | 1151 |
| 58.9 | 5.02 | 4.83 | 4.24 | 2.57 | 2013 | 1164 |
| 59.2 | 4.83 | 4.80 | .81 | .49 | 2022 | 1167 |
| 59.4 | 4.80 | 4.68 | 2.52 | 1.54 | 2050 | 1175 |
| 59.7 | 4.68 | 4.58 | 2.28 | 1.41 | 2075 | 1181 |
| 61.3 | 4.58 | 4.55 | .61 | .40 | 2081 | 1183 |
| 61.6 | 4.55 | 4.40 | 3.52 | 2.37 | 2115 | 1191 |
| 64.6 | 4.40 | 4.09 | 7.20 | 4.99 | 2179 | 1206 |
| 68.8 | 4.09 | 3.89 | 4.75 | 4.05 | 2201 | 1207 |
| 69.1 | 3.89 | 3.86 | .66 | .56 | 2205 | 1207 |
| 69.3 | 3.86 | 3.82 | .98 | .82 | 2211 | 1207 |
| 69.6 | 3.82 | 3.76 | 1.54 | 1.28 | 2220 | 1207 |
| 70.1 | 3.76 | 3.72 | 1.00 | .82 | 2227 | 1207 |
| 70.4 | 3.72 | 3.49 | 5.41 | 4.42 | 2264 | 1207 |
| 74.9 | 3.49 | 3.11 | 9.68 | 7.91 | 2303 | 1207 |
| 79.6 | 3.11 | 2.93 | 4.90 | 3.80 | 2347 | 1207 |
| 79.9 | 2.93 | 2.90 | .71 | .55 | 2352 | 1207 |
| 80.4 | 2.90 | 2.88 | .45 | .36 | 2356 | 1207 |
| 80.7 | 2.88 | 2.85 | .72 | .57 | 2361 | 1207 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 81.2 | 2.85 | 2.85 | .17 | .13 | 2362 | 1207 |
| 81.4 | 2.85 | 2.69 | 4.02 | 3.26 | 2389 | 1207 |
| 88.2 | 2.69 | 2.52 | 4.63 | 4.06 | 2402 | 1207 |
| 88.4 | 2.52 | 2.51 | .26 | .23 | 2402 | 1207 |
| 88.7 | 2.51 | 2.49 | .58 | .51 | 2404 | 1207 |
| 89.2 | 2.49 | 2.48 | .38 | .33 | 2405 | 1207 |
| 89.4 | 2.48 | 2.43 | 1.47 | 1.28 | 2408 | 1207 |
| 90.5 | 2.43 | 2.14 | 7.81 | 6.82 | 2420 | 1207 |
| 100.3 | 2.14 | 1.67 | 13.71 | 11.75 | 2434 | 1207 |
| 113.6 | 1.67 | 1.18 | 14.77 | 12.53 | 2455 | 1207 |
| 129.8 | 1.18 | .71 | 15.31 | 13.14 | 2497 | 1207 |
| 149.6 | .71 | 0.00 | 23.84 | 20.11 | 2609 | 1207 |

RESULTATS (AVEC HC<0 ELIMINE)

FICHIER: 300913 20KW-1
NOMBRE DE POINTS DE MESURE= 69

MESURES DE CHEMINEE (100% CHARGE BRULEE)

POIDS SEC= 16.8 KG
DUREE =180 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
2609 grammes
14.1 g/MJ
870 g/Hre

HYDROCARBURES :
1207 grammes
6.5 g/MJ
402 g/Hre

INPUT : 333 MJ

OUTPUT : 185 MJ

PUISSANCE: 62 MJ/Hre

RENDEMENT:55.4 %

MESURES DE CHEMINEE (90.1% CHARGE BRULEE)

POIDS SEC= 15.2 KG
DUREE =107 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
2434 grammes
17.5 g/MJ
1366 g/Hre

HYDROCARBURES :
1207 grammes
8.7 g/MJ
677 g/Hre

INPUT : 279 MJ

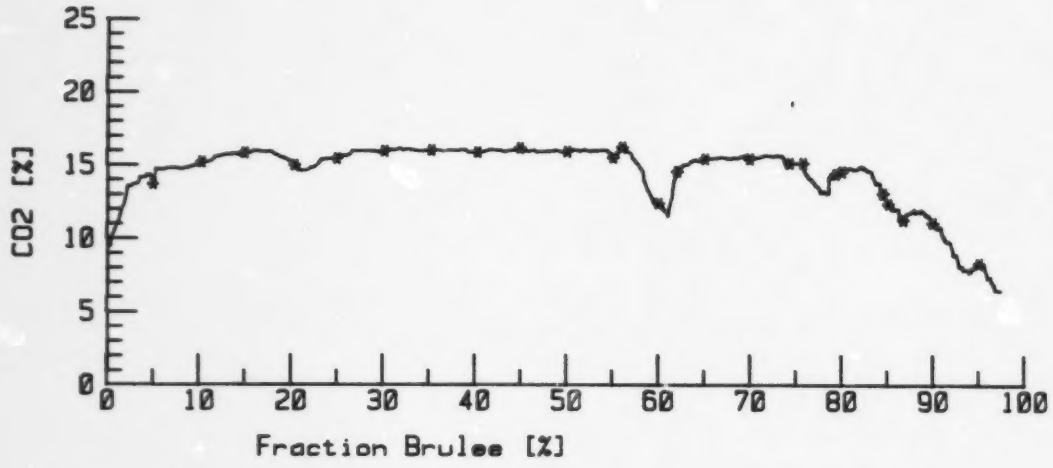
OUTPUT : 139 MJ

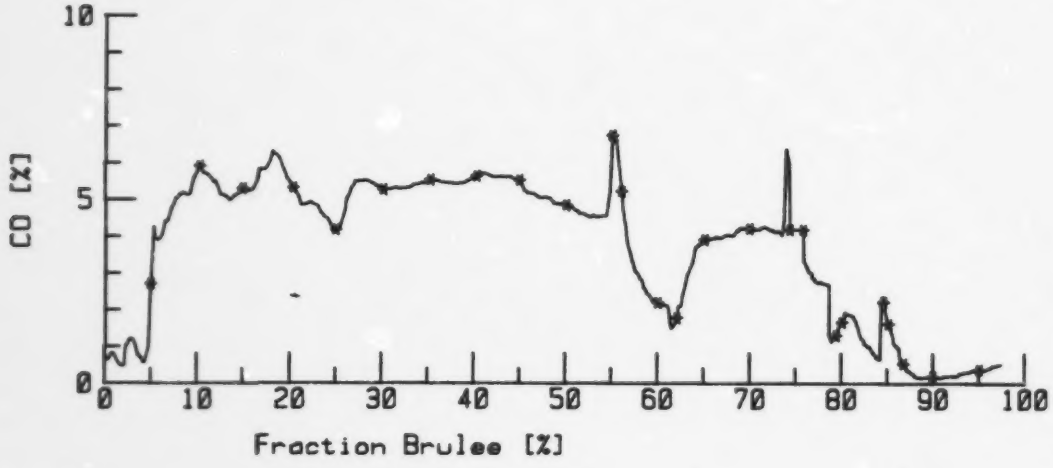
PUISSANCE: 78 MJ/Hre

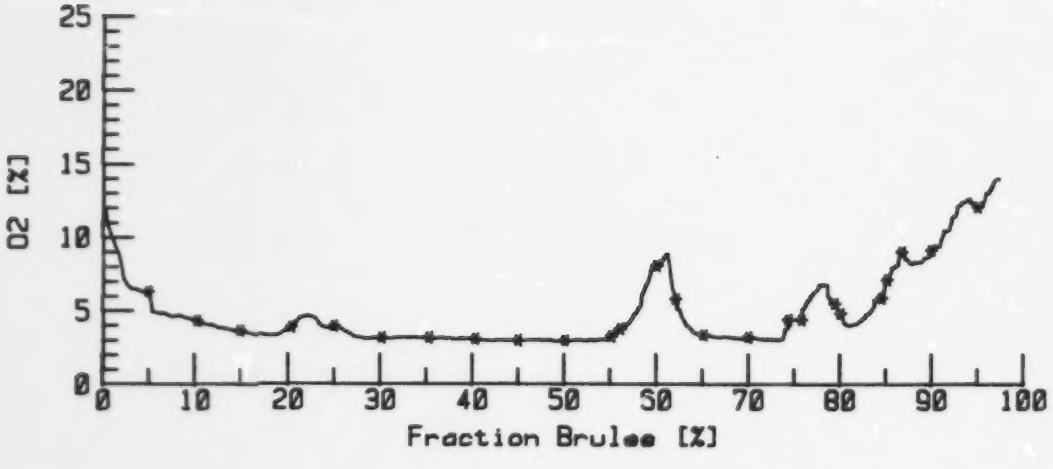
RENDEMENT:49.8 %

MESURES AU PLENUM

| | | |
|---|---|---|
| FRACTION BRULEE | 95.8 % | 90.1 % |
| DUREE | 140 MIN | 107 MIN |
| DELTA T MOYEN | 28 C | 29 C |
| INPUT | 310 MJ | 279 MJ |
| OUTPUT | 157 MJ | 126 MJ |
| PUISSANCE: | 68 MJ/H | 71 MJ/H |
| RENDEMENT | 51 % | 45 % |




Fichier: 300913 Titre: 20KW-1
Intervalle de lecture [poids %]: 5
Nbre de lectures au changement d'etat: 1

# MESURES

FICHIER: 300913
TITRE: 20KW-1
POIDS INITIAL (BASE HUMIDE)=20.30KG
HUMIDITE DU BOIS=17%
POIDS INTIAL (BASE SECHE)16.85KG
INTERVALLE DE LECTURE [%] 5
NBRE. DE LECTURES AU CHANGEMENT D'ETAT 1

| TEMPS MIN. | POIDS KG | T.CH. C | T.AMB C | CO2 % | CO % | O2 % |
|---|---|---|---|---|---|---|
| 5.6 | 19.28 | 174.0 | 23.1 | 13.69 | 2.71 | 6.30 |
| 9.2 | 18.20 | 200.9 | 23.9 | 15.20 | 5.90 | 4.33 |
| 11.7 | 17.24 | 212.7 | 22.8 | 15.83 | 5.29 | 3.68 |
| 14.4 | 16.15 | 223.0 | 22.6 | 14.99 | 5.33 | 3.87 |
| 17.2 | 15.21 | 231.6 | 23.0 | 15.44 | 4.18 | 3.96 |
| 20.2 | 14.16 | 238.4 | 22.5 | 15.94 | 5.28 | 3.17 |
| 23.2 | 13.12 | 236.8 | 23.1 | 16.01 | 5.54 | 3.17 |
| 26.3 | 12.10 | 238.8 | 23.4 | 15.89 | 5.64 | 3.08 |
| 29.0 | 11.15 | 237.3 | 23.6 | 16.18 | 5.53 | 2.97 |
| 32.6 | 10.11 | 233.6 | 22.9 | 15.95 | 4.85 | 2.97 |
| 36.1 | 9.09 | 232.0 | 23.6 | 15.54 | 6.76 | 3.27 |
| 36.8 | 8.89 | 229.4 | 23.6 | 16.25 | 5.22 | 3.76 |
| 42.6 | 8.09 | 156.5 | 22.6 | 12.40 | 2.19 | 8.08 |
| 46.4 | 7.68 | 130.1 | 22.7 | 14.60 | 1.78 | 5.81 |
| 49.6 | 7.07 | 168.3 | 21.5 | 15.45 | 3.91 | 3.36 |
| 54.4 | 6.08 | 205.1 | 23.3 | 15.46 | 4.21 | 3.22 |
| 58.9 | 5.19 | 216.3 | 23.0 | 15.16 | 4.18 | 4.40 |
| 59.7 | 4.90 | 205.9 | 22.6 | 15.16 | 4.18 | 4.40 |
| 68.8 | 4.16 | 127.9 | 21.2 | 14.41 | 1.31 | 5.51 |
| 69.6 | 4.03 | 135.8 | 22.1 | 14.58 | 1.67 | 4.84 |
| 79.6 | 3.12 | 211.0 | 22.7 | 13.10 | 2.21 | 5.88 |
| 81.2 | 3.00 | 187.8 | 22.3 | 12.39 | 1.62 | 7.13 |
| 88.2 | 2.67 | 124.5 | 22.6 | 11.30 | .53 | 9.03 |
| 100.3 | 2.02 | 169.8 | 22.3 | 11.09 | .19 | 9.15 |
| 129.8 | .99 | 139.7 | 24.2 | 8.32 | .37 | 12.09 |

RESULTATS (AVEC HC<0 CONSERVE)

TITRE: 20KW-1
FICHIER: 300913

| TEMPS MIN. | P.INI KG | P.FIN KG | INPUT MJ | OUTPUT MJ | CO gr | HC gr |
|---|---|---|---|---|---|---|
| 5.6 | 16.85 | 15.85 | 12.78 | 1.86 | 97 | 79 |
| 9.2 | 15.85 | 15.16 | 9.26 | .60 | 206 | 161 |
| 11.7 | 15.16 | 14.43 | 10.12 | 1.25 | 314 | 249 |
| 14.4 | 14.43 | 13.69 | 10.83 | 1.90 | 438 | 337 |
| 17.2 | 13.69 | 12.93 | 11.26 | 2.55 | 543 | 427 |
| 20.2 | 12.93 | 12.12 | 12.51 | 2.81 | 677 | 531 |
| 23.2 | 12.12 | 11.29 | 13.05 | 3.23 | 819 | 637 |
| 26.3 | 11.29 | 10.48 | 13.08 | 3.82 | 967 | 735 |
| 29.0 | 10.48 | 9.65 | 13.83 | 4.58 | 1120 | 832 |
| 32.6 | 9.65 | 8.77 | 15.13 | 6.38 | 1280 | 916 |
| 36.1 | 8.77 | 8.25 | 9.41 | 3.62 | 1406 | 973 |
| 36.8 | 8.25 | 7.81 | 7.84 | 3.13 | 1488 | 1024 |
| 42.6 | 7.81 | 7.28 | 9.95 | 5.41 | 1558 | 1069 |
| 46.4 | 7.28 | 6.82 | 8.68 | 5.52 | 1604 | 1099 |
| 49.6 | 6.82 | 6.10 | 14.09 | 9.01 | 1748 | 1132 |
| 54.4 | 6.10 | 5.26 | 17.69 | 11.59 | 1944 | 1165 |
| 58.9 | 5.26 | 4.72 | 11.88 | 7.20 | 2074 | 1201 |
| 59.7 | 4.72 | 4.25 | 10.63 | 6.56 | 2191 | 1233 |
| 68.8 | 4.25 | 3.85 | 9.54 | 8.13 | 2237 | 1233 |
| 69.6 | 3.85 | 3.36 | 11.73 | 10.29 | 2307 | 1224 |
| 79.6 | 3.36 | 2.89 | 12.49 | 10.60 | 2417 | 1208 |
| 81.2 | 2.89 | 2.68 | 5.47 | 4.66 | 2456 | 1203 |
| 88.2 | 2.68 | 2.22 | 12.48 | 11.36 | 2489 | 1195 |
| 100.3 | 2.22 | 1.43 | 22.89 | 22.02 | 2514 | 1153 |
| 129.8 | 1.43 | 0.00 | 45.78 | 41.63 | 2640 | 1111 |

RESULTATS (AVEC HC<0 CONSERVE)

FICHIER: 300913 20KW-1
NOMBRE DE POINTS DE MESURE= 25

MESURES DE CHEMINEE (100% CHARGE BRULEE)

POIDS SEC= 16.8 KG
DUREE =180 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
2640 grammes
13.9 g/MJ
880 g/Hre
HYDROCARBURES :
1111 grammes
5.9 g/MJ
370 g/Hre

INPUT : 332 MJ

OUTPUT : 190 MJ

PUISSANCE: 63 MJ/Hre

RENDEMENT:57.1 %

MESURES DE CHEMINEE (91.5% CHARGE BRULEE)

POIDS SEC= 15.4 KG
DUREE =115 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
2514 grammes
17.0 g/MJ
1311 g/Hre
HYDROCARBURES :
1153 grammes
7.8 g/MJ
601 g/Hre

INPUT : 287 MJ

OUTPUT : 148 MJ

PUISSANCE: 77 MJ/Hre

RENDEMENT:51.7 %

MESURES AU PLENUM

| | | |
|---|---|---|
| FRACTION BRULEE | 91.5 % | 91.5 % |
| DUREE | 115 MIN | 115 MIN |
| DELTA T MOYEN | 29 C | 29 C |
| INPUT | 287 MJ | 287 MJ |
| OUTPUT | 133 MJ | 136 MJ |
| PUISSANCE: | 69 MJ/H | 71 MJ/H |
| RENDEMENT | 46 % | 47 % |

RESULTATS (AVEC HC<0 ELIMINE)

TITRE: 20KW-1
FICHIER: 300913

| TEMPS MIN. | P.INI KG | P.FIN KG | INPUT MJ | OUTPUT MJ | CO gr | HC gr |
|---|---|---|---|---|---|---|
| 5.6 | 16.85 | 15.85 | 12.78 | 1.86 | 97 | 79 |
| 9.2 | 15.85 | 15.16 | 9.26 | .60 | 206 | 161 |
| 11.7 | 15.16 | 14.43 | 10.12 | 1.25 | 314 | 249 |
| 14.4 | 14.43 | 13.69 | 10.83 | 1.90 | 438 | 337 |
| 17.2 | 13.69 | 12.93 | 11.26 | 2.55 | 543 | 427 |
| 20.2 | 12.93 | 12.12 | 12.51 | 2.81 | 677 | 531 |
| 23.2 | 12.12 | 11.29 | 13.05 | 3.23 | 819 | 637 |
| 26.3 | 11.29 | 10.48 | 13.08 | 3.82 | 967 | 735 |
| 29.0 | 10.48 | 9.65 | 13.83 | 4.58 | 1120 | 832 |
| 32.6 | 9.65 | 8.77 | 15.13 | 6.38 | 1280 | 916 |
| 36.1 | 8.77 | 8.25 | 9.41 | 3.62 | 1406 | 973 |
| 36.8 | 8.25 | 7.81 | 7.84 | 3.13 | 1488 | 1024 |
| 42.6 | 7.81 | 7.28 | 9.95 | 5.41 | 1558 | 1069 |
| 46.4 | 7.28 | 6.82 | 8.68 | 5.52 | 1604 | 1099 |
| 49.6 | 6.82 | 6.10 | 14.09 | 9.01 | 1748 | 1132 |
| 54.4 | 6.10 | 5.26 | 17.69 | 11.59 | 1944 | 1165 |
| 58.9 | 5.26 | 4.72 | 11.88 | 7.20 | 2074 | 1201 |
| 59.7 | 4.72 | 4.25 | 10.63 | 6.56 | 2191 | 1233 |
| 68.8 | 4.25 | 3.85 | 9.54 | 8.13 | 2237 | 1233 |
| 69.6 | 3.85 | 3.36 | 11.73 | 9.79 | 2307 | 1233 |
| 79.6 | 3.36 | 2.89 | 12.49 | 9.68 | 2417 | 1233 |
| 81.2 | 2.89 | 2.68 | 5.47 | 4.39 | 2456 | 1233 |
| 88.2 | 2.68 | 2.22 | 12.48 | 10.93 | 2489 | 1233 |
| 100.3 | 2.22 | 1.43 | 22.89 | 19.63 | 2514 | 1233 |
| 129.8 | 1.43 | 0.00 | 45.78 | 39.30 | 2640 | 1233 |

RESULTATS (AVEC HC<0 ELIMINE)

FICHIER: 300913 20KW-1
NOMBRE DE POINTS DE MESURE= 25

MESURES DE CHEMINEE (100% CHARGE BRULEE)

POIDS SEC= 16.8 KG
DUREE =180 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
2640 grammes
14.4 g/MJ
880 g/Hre

HYDROCARBURES :
1233 grammes
6.7 g/MJ
411 g/Hre

INPUT : 332 MJ

OUTPUT : 183 MJ

PUISSANCE: 61 MJ/Hre

RENDEMENT:55.0 %

MESURES DE CHEMINEE (91.5% CHARGE BRULEE)

POIDS SEC= 15.4 KG
DUREE =115 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
2514 grammes
17.5 g/MJ
1311 g/Hre

HYDROCARBURES :
1233 grammes
8.6 g/MJ
643 g/Hre

INPUT : 287 MJ

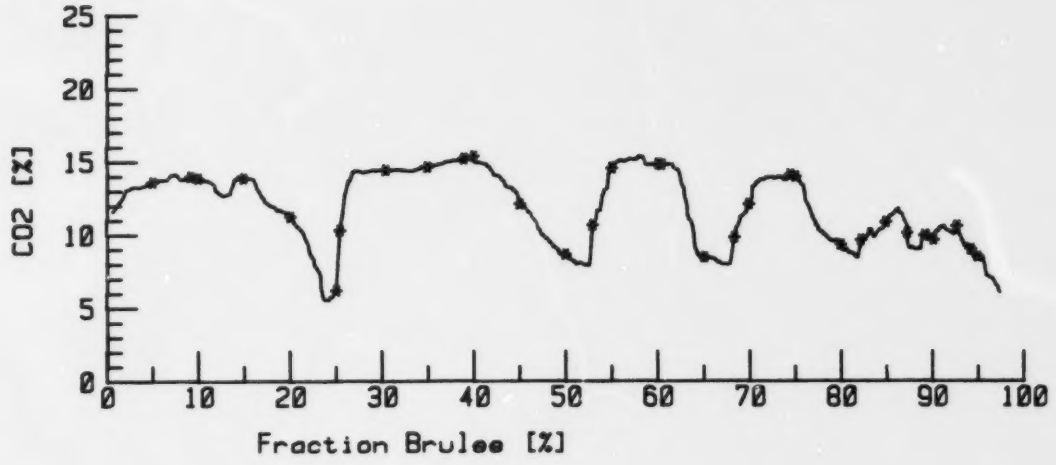
OUTPUT : 144 MJ

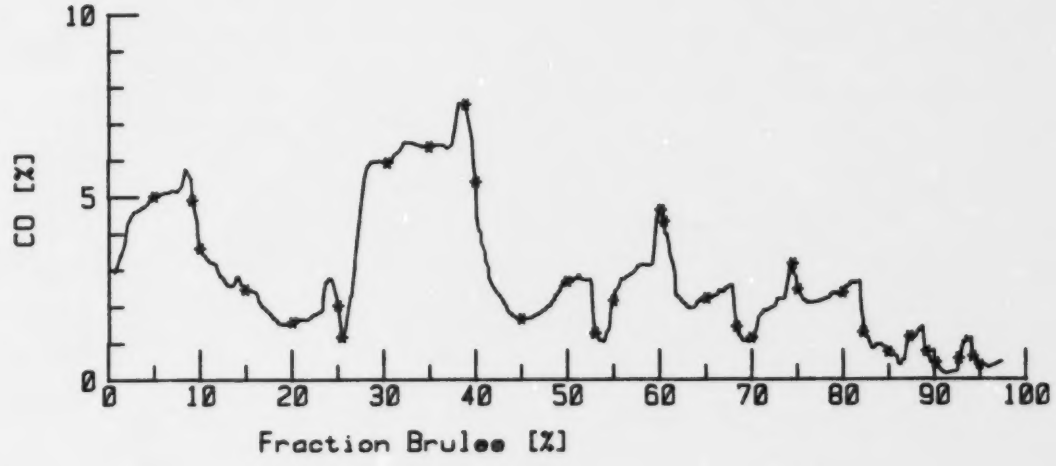
PUISSANCE: 75 MJ/Hre

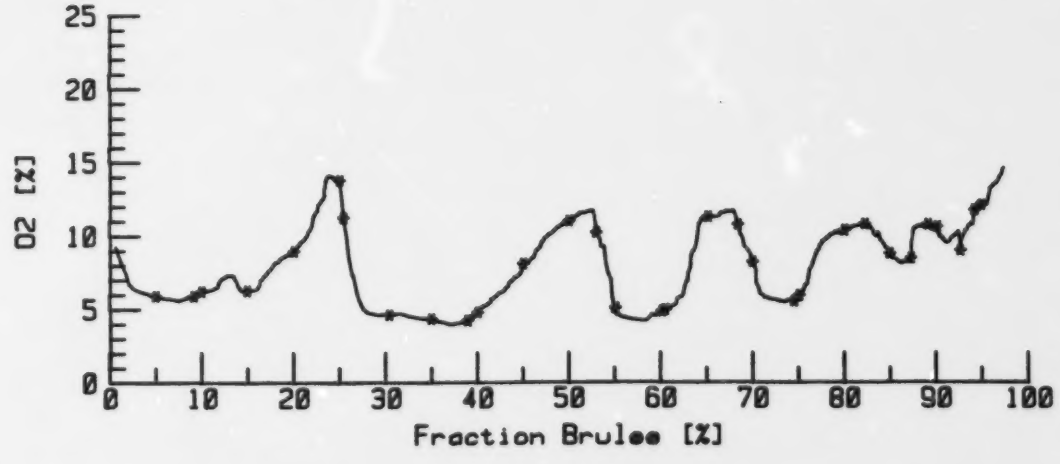
RENDEMENT:50.1 %

MESURES AU PLENUM

| | | |
|---|---|---|
| FRACTION BRULEE | 91.5 % | 91.5 % |
| DUREE | 115 MIN | 115 MIN |
| DELTA T MOYEN | 29 C | 29 C |
| INPUT | 287 MJ | 287 MJ |
| OUTPUT | 133 MJ | 136 MJ |
| PUISSANCE: | 69 MJ/H | 71 MJ/H |
| RENDEMENT | 46 % | 47 % |




Fichier: 160912 Titre: 13KW-2
Intervalle de lecture [poids %]: 5
Nbre de lectures au changement d'etat: 1

MESURES

FICHIER: 160912
TITRE: 13KW-2
POIDS INITIAL (BASE HUMIDE)=20.35KG
HUMIDITE DU BOIS=15%
POIDS INTIAL (BASE SECHE)17.30KG
INTERVALLE DE LECTURE [%] 5
NBRE. DE LECTURES AU CHANGEMENT D'ETAT 1

| TEMPS MIN. | POIDS KG | T.CH. C | T.AMB C | CO2 % | CO % | O2 % |
|---|---|---|---|---|---|---|
| 3.1 | 19.32 | 155.6 | 24.9 | 13.60 | 5.02 | 5.90 |
| 5.7 | 18.48 | 171.2 | 25.1 | 13.98 | 4.92 | 5.91 |
| 6.4 | 18.31 | 165.5 | 25.0 | 13.86 | 3.60 | 6.22 |
| 13.2 | 17.30 | 131.9 | 25.2 | 13.85 | 2.47 | 6.27 |
| 23.2 | 16.26 | 113.0 | 25.2 | 11.23 | 1.58 | 8.94 |
| 39.3 | 15.25 | 78.2 | 25.3 | 6.18 | 2.04 | 13.77 |
| 40.1 | 15.17 | 78.4 | 25.3 | 10.29 | 1.17 | 11.24 |
| 43.8 | 14.15 | 130.2 | 25.2 | 14.43 | 5.93 | 4.63 |
| 46.4 | 13.23 | 157.1 | 25.4 | 14.62 | 6.37 | 4.36 |
| 48.9 | 12.42 | 171.7 | 25.3 | 15.20 | 7.53 | 4.24 |
| 49.9 | 12.20 | 165.8 | 25.3 | 15.36 | 5.41 | 4.78 |
| 58.9 | 11.18 | 124.5 | 25.3 | 12.10 | 1.67 | 8.10 |
| 75.4 | 10.17 | 89.4 | 25.3 | 8.64 | 2.69 | 11.02 |
| 87.4 | 9.56 | 80.7 | 24.8 | 10.64 | 1.28 | 10.23 |
| 89.9 | 9.14 | 108.2 | 24.9 | 14.56 | 2.16 | 5.09 |
| 95.2 | 8.10 | 169.0 | 25.0 | 14.86 | 4.64 | 4.86 |
| 95.5 | 8.03 | 167.9 | 24.9 | 14.80 | 4.33 | 4.96 |
| 107.3 | 7.10 | 107.8 | 24.9 | 8.46 | 2.23 | 11.28 |
| 124.2 | 6.43 | 77.9 | 25.0 | 9.82 | 1.45 | 10.77 |
| 127.2 | 6.10 | 105.2 | 25.0 | 12.08 | 1.15 | 8.21 |
| 134.0 | 5.18 | 174.1 | 25.2 | 14.10 | 3.17 | 5.55 |
| 135.5 | 5.07 | 164.4 | 25.4 | 13.99 | 2.47 | 5.94 |
| 153.1 | 4.06 | 91.6 | 25.3 | 9.34 | 2.38 | 10.34 |
| 167.3 | 3.61 | 78.6 | 25.6 | 9.63 | 1.30 | 10.77 |
| 175.4 | 3.05 | 136.2 | 25.4 | 10.84 | .76 | 8.77 |
| 181.8 | 2.58 | 163.5 | 25.7 | 10.11 | 1.17 | 8.46 |
| 200.1 | 2.20 | 80.2 | 25.6 | 9.95 | .77 | 10.74 |
| 203.9 | 2.00 | 105.9 | 25.4 | 9.65 | .47 | 10.58 |
| 217.0 | 1.49 | 143.3 | 25.8 | 10.58 | .58 | 8.97 |
| 233.1 | 1.17 | 83.5 | 26.0 | 9.02 | .64 | 11.71 |
| 236.1 | 1.02 | 102.7 | 26.0 | 8.50 | .41 | 12.05 |

RESULTATS (AVEC HC<0 CONSERVE)

TITRE: 13KW-2
FICHIER: 160912

| TEMPS MIN. | P.INI KG | P.FIN KG | INPUT MJ | OUTPUT MJ | CO gr | HC gr |
|---|---|---|---|---|---|---|
| 3.1 | 17.30 | 16.31 | 12.66 | 1.37 | 148 | 96 |
| 5.7 | 16.31 | 15.95 | 4.76 | .52 | 201 | 137 |
| 6.4 | 15.95 | 15.53 | 5.76 | .96 | 252 | 183 |
| 13.2 | 15.53 | 14.77 | 10.65 | 2.88 | 325 | 263 |
| 23.2 | 14.77 | 13.98 | 11.37 | 3.90 | 389 | 341 |
| 39.3 | 13.98 | 13.56 | 6.34 | 1.86 | 460 | 387 |
| 40.1 | 13.56 | 13.12 | 6.56 | 1.69 | 487 | 451 |
| 43.8 | 13.12 | 12.34 | 12.07 | 2.81 | 635 | 556 |
| 46.4 | 12.34 | 11.63 | 11.28 | 2.73 | 778 | 653 |
| 48.9 | 11.63 | 11.20 | 6.91 | 1.44 | 869 | 718 |
| 49.9 | 11.20 | 10.68 | 8.50 | 2.22 | 959 | 793 |
| 58.9 | 10.68 | 9.81 | 14.54 | 7.22 | 1041 | 870 |
| 75.4 | 9.81 | 9.10 | 12.16 | 5.88 | 1174 | 931 |
| 87.4 | 9.10 | 8.65 | 7.96 | 4.25 | 1213 | 975 |
| 89.9 | 8.65 | 8.00 | 11.59 | 7.28 | 1286 | 1012 |
| 95.2 | 8.00 | 7.51 | 9.26 | 4.51 | 1386 | 1060 |
| 95.5 | 7.51 | 7.06 | 8.54 | 4.30 | 1475 | 1102 |
| 107.3 | 7.06 | 6.33 | 14.30 | 9.22 | 1626 | 1135 |
| 124.2 | 6.33 | 5.88 | 9.27 | 6.25 | 1686 | 1164 |
| 127.2 | 5.88 | 5.31 | 12.03 | 9.27 | 1741 | 1180 |
| 134.0 | 5.31 | 4.83 | 10.66 | 7.16 | 1843 | 1204 |
| 135.5 | 4.83 | 4.31 | 11.70 | 8.27 | 1935 | 1227 |
| 153.1 | 4.31 | 3.63 | 16.46 | 12.23 | 2120 | 1246 |
| 167.3 | 3.63 | 3.16 | 11.90 | 9.39 | 2199 | 1263 |
| 175.4 | 3.16 | 2.68 | 12.81 | 12.81 | 2252 | 1224 |
| 181.8 | 2.68 | 2.28 | 11.01 | 12.67 | 2335 | 1145 |
| 200.1 | 2.28 | 2.00 | 7.84 | 6.51 | 2368 | 1156 |
| 203.9 | 2.00 | 1.66 | 9.90 | 9.50 | 2397 | 1142 |
| 217.0 | 1.66 | 1.27 | 12.03 | 12.79 | 2439 | 1093 |
| 233.1 | 1.27 | 1.04 | 7.08 | 5.89 | 2467 | 1104 |
| 236.1 | 1.04 | 0.00 | 33.41 | 29.88 | 2564 | 1106 |

RESULTATS (AVEC HC<0 CONSERVE)

FICHIER: 160912 13KW-2
NOMBRE DE POINTS DE MESURE= 31

MESURES DE CHEMINEE (100% CHARGE BRULEE)

POIDS SEC= 17.3 KG
DUREE =275 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
2564 grammes
12.3 g/MJ
559 g/Hre

HYDROCARBURES :
1106 grammes
5.3 g/MJ
241 g/Hre

INPUT : 341 MJ

OUTPUT : 208 MJ

PUISSANCE: 45 MJ/Hre

RENDEMENT:60.8 %

MESURES DE CHEMINEE (90.4% CHARGE BRULEE)

POIDS SEC= 15.6 KG
DUREE =210 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
2397 grammes
15.1 g/MJ
683 g/Hre

HYDROCARBURES :
1142 grammes
7.2 g/MJ
325 g/Hre

INPUT : 289 MJ

OUTPUT : 159 MJ

PUISSANCE: 45 MJ/Hre

RENDEMENT:55.1 %

MESURES AU PLENUM

| | | |
|---|---|---|
| FRACTION BRULEE | 94.0 % | 90.4 % |
| DUREE | 235 MIN | 210 MIN |
| DELTA T MOYEN | 19 C | 19 C |
| INPUT | 308 MJ | 289 MJ |
| OUTPUT | 182 MJ | 163 MJ |
| PUISSANCE: | 47 MJ/H | 47 MJ/H |
| RENDEMENT | 59 % | 57 % |

RESULTATS (AVEC HC<0 ELIMINE)

TITRE: 13KW-2
FICHIER: 160912

| TEMPS MIN. | P.INI KG | P.FIN KG | INPUT MJ | OUTPUT MJ | CO gr | HC gr |
|---|---|---|---|---|---|---|
| 3.1 | 17.30 | 16.31 | 12.66 | 1.37 | 148 | 96 |
| 5.7 | 16.31 | 15.95 | 4.76 | .52 | 201 | 137 |
| 6.4 | 15.95 | 15.53 | 5.76 | .96 | 252 | 183 |
| 13.2 | 15.53 | 14.77 | 10.65 | 2.88 | 325 | 263 |
| 23.2 | 14.77 | 13.98 | 11.37 | 3.90 | 389 | 341 |
| 39.3 | 13.98 | 13.56 | 6.34 | 1.86 | 460 | 387 |
| 40.1 | 13.56 | 13.12 | 6.56 | 1.69 | 487 | 451 |
| 43.8 | 13.12 | 12.34 | 12.07 | 2.81 | 635 | 556 |
| 46.4 | 12.34 | 11.63 | 11.28 | 2.73 | 778 | 653 |
| 48.9 | 11.63 | 11.20 | 6.91 | 1.44 | 869 | 718 |
| 49.9 | 11.20 | 10.68 | 8.50 | 2.22 | 959 | 793 |
| 58.9 | 10.68 | 9.81 | 14.54 | 7.22 | 1041 | 870 |
| 75.4 | 9.81 | 9.10 | 12.16 | 5.88 | 1174 | 931 |
| 87.4 | 9.10 | 8.65 | 7.96 | 4.25 | 1213 | 975 |
| 89.9 | 8.65 | 8.00 | 11.59 | 7.28 | 1286 | 1012 |
| 95.2 | 8.00 | 7.51 | 9.26 | 4.51 | 1386 | 1060 |
| 95.5 | 7.51 | 7.06 | 8.54 | 4.30 | 1475 | 1102 |
| 107.3 | 7.06 | 6.33 | 14.30 | 9.22 | 1626 | 1135 |
| 124.2 | 6.33 | 5.88 | 9.27 | 6.25 | 1686 | 1164 |
| 127.2 | 5.88 | 5.31 | 12.03 | 9.27 | 1741 | 1180 |
| 134.0 | 5.31 | 4.83 | 10.66 | 7.16 | 1843 | 1204 |
| 135.5 | 4.83 | 4.31 | 11.70 | 8.27 | 1935 | 1227 |
| 153.1 | 4.31 | 3.63 | 16.46 | 12.23 | 2120 | 1246 |
| 167.3 | 3.63 | 3.16 | 11.90 | 9.39 | 2199 | 1263 |
| 175.4 | 3.16 | 2.68 | 12.81 | 10.66 | 2252 | 1263 |
| 181.8 | 2.68 | 2.28 | 11.01 | 8.23 | 2335 | 1263 |
| 200.1 | 2.28 | 2.00 | 7.84 | 6.51 | 2368 | 1274 |
| 203.9 | 2.00 | 1.66 | 9.90 | 8.72 | 2397 | 1274 |
| 217.0 | 1.66 | 1.27 | 12.03 | 10.09 | 2439 | 1274 |
| 233.1 | 1.27 | 1.04 | 7.08 | 5.89 | 2467 | 1284 |
| 236.1 | 1.04 | 0.00 | 33.41 | 29.88 | 2564 | 1286 |

RESULTATS (AVEC HC<0 ELIMINE)

FICHIER: 160912 13KW-2
NOMBRE DE POINTS DE MESURE= 31

MESURES DE CHEMINEE (100% CHARGE BRULEE)

POIDS SEC= 17.3 KG
DUREE =275 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
2564 grammes
13.0 g/MJ
559 g/Hre

HYDROCARBURES :
1286 grammes
6.5 g/MJ
281 g/Hre

INPUT : 341 MJ

OUTPUT : 198 MJ

PUISSANCE: 43 MJ/Hre

RENDEMENT:57.9 %

MESURES DE CHEMINEE (90.4% CHARGE BRULEE)

POIDS SEC= 15.6 KG
DUREE =210 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
2397 grammes
15.8 g/MJ
683 g/Hre

HYDROCARBURES :
1274 grammes
8.4 g/MJ
363 g/Hre

INPUT : 289 MJ

OUTPUT : 152 MJ

PUISSANCE: 43 MJ/Hre

RENDEMENT:52.5 %

MESURES AU PLENUM

| | | |
|---|---|---|
| FRACTION BRULEE | 94.0 % | 90.4 % |
| DUREE | 235 MIN | 210 MIN |
| DELTA T MOYEN | 19 C | 19 C |
| INPUT | 308 MJ | 289 MJ |
| OUTPUT | 182 MJ | 163 MJ |
| PUISSANCE: | 47 MJ/H | 47 MJ/H |
| RENDEMENT | 59 % | 57 % |

FAB-85-099

# ANNEXE III

Résultats détaillés

- Série no 2 -

CRIQ CENTRE DE RECHERCHE INDUSTRIELLE DU QUÉBEC

# MESURES

FICHIER: 250911
TITRE: FULL POWER 1
POIDS INITIAL (BASE HUMIDE)=21.15KG
HUMIDITE DU BOIS=17%
POIDS INTIAL (BASE SECHE)17.56KG
INTERVALLE DE LECTURE (%) 2.5
NBRE. DE LECTURES AU CHANGEMENT D'ETAT 1

| TEMPS MIN. | POIDS KG | T.CH. C | T.AMB C | CO2 % | CO % | O2 % |
|---|---|---|---|---|---|---|
| 2.7 | 20.53 | 185.9 | 24.5 | 15.56 | 5.71 | 3.90 |
| 4.2 | 20.04 | 193.1 | 24.5 | 15.93 | 6.52 | 3.42 |
| 5.7 | 19.56 | 199.1 | 24.6 | 16.43 | 7.24 | 2.71 |
| 7.2 | 18.94 | 200.4 | 24.1 | 16.69 | 7.86 | 2.38 |
| 8.2 | 18.44 | 199.1 | 24.1 | 16.50 | 7.83 | 2.44 |
| 9.5 | 17.89 | 193.2 | 24.1 | 16.37 | 7.79 | 2.47 |
| 10.5 | 17.40 | 190.5 | 24.0 | 16.41 | 7.80 | 2.49 |
| 11.7 | 16.87 | 187.8 | 24.3 | 16.40 | 7.90 | 2.50 |
| 13.0 | 16.34 | 186.1 | 23.8 | 16.38 | 7.92 | 2.47 |
| 14.0 | 15.83 | 184.4 | 24.2 | 16.09 | 7.60 | 2.46 |
| 15.5 | 15.28 | 183.0 | 24.0 | 16. | 7.94 | 2.49 |
| 17.1 | 14.76 | 183.1 | 24.0 | 16.27 | 7.98 | 2.57 |
| 18.6 | 14.21 | 183.4 | 24.1 | 15.94 | 8.23 | 2.60 |
| 19.6 | 13.75 | 184.0 | 23.9 | 15.95 | 8.10 | 2.70 |
| 21.4 | 13.12 | 186.7 | 24.1 | 15.88 | 8.45 | 2.63 |
| 22.6 | 12.64 | 189.2 | 24.0 | 15.95 | 8.52 | 2.62 |
| 24.2 | 12.08 | 191.9 | 23.1 | 15.75 | 8.42 | 2.65 |
| 25.7 | 11.58 | 192.4 | 23.7 | 15.87 | 7.95 | 2.55 |
| 27.2 | 11.02 | 193.8 | 23.7 | 16.15 | 7.57 | 2.50 |
| 28.7 | 10.56 | 197.2 | 23.6 | 15.90 | 7.58 | 2.48 |
| 30.2 | 10.02 | 199.4 | 24.2 | 16.23 | 6.45 | 2.44 |
| 32.3 | 9.44 | 201.7 | 23.7 | 16.24 | 5.85 | 2.64 |
| 34.0 | 8.99 | 203.1 | 23.8 | 16.34 | 5.60 | 2.71 |
| 36.0 | 8.43 | 204.0 | 24.1 | 16.94 | 4.82 | 2.58 |
| 38.3 | 7.90 | 205.6 | 24.2 | 16.64 | 4.64 | 2.63 |
| 40.8 | 7.32 | 206.3 | 23.8 | 16.49 | 4.81 | 2.65 |
| 42.8 | 6.86 | 204.9 | 24.1 | 16.58 | 4.95 | 2.57 |
| 45.1 | 6.33 | 201.5 | 24.5 | 16.29 | 4.97 | 2.60 |
| 47.7 | 5.81 | 200.7 | 24.4 | 16.46 | 4.51 | 2.43 |
| 51.7 | 5.23 | 203.8 | 24.2 | 16.51 | 4.00 | 2.42 |
| 54.8 | 4.73 | 205.1 | 24.4 | 16.86 | 3.48 | 2.35 |
| 58.1 | 4.22 | 207.6 | 24.8 | 17.29 | 2.41 | 2.33 |
| 62.5 | 3.68 | 207.7 | 23.8 | 17.00 | 2.09 | 2.38 |
| 66.9 | 3.09 | 208.9 | 24.5 | 17.15 | 1.41 | 2.46 |
| 71.7 | 2.59 | 210.2 | 23.9 | 16.47 | .40 | 3.01 |
| 77.6 | 2.11 | 205.5 | 23.9 | 15.50 | .08 | 4.72 |
| 85.7 | 1.58 | 197.3 | 23.7 | 14.35 | .05 | 6.00 |
| 98.7 | 1.05 | 177.1 | 23.8 | 10.86 | .16 | 9.69 |
| 114.2 | .52 | 154.4 | 24.1 | 8.54 | .36 | 12.07 |

RESULTATS (AVEC HC<0 CONSERVE)

TITRE: FULL POWER 1
FICHIER: 250911

| TEMPS MIN. | P.INI KG | P.FIN KG | INPUT MJ | OUTPUT MJ | CO gr | HC gr |
|---|---|---|---|---|---|---|
| 2.7 | 17.56 | 17.02 | 6.80 | .04 | 79 | 50 |
| 4.2 | 17.02 | 16.70 | 4.04 | .06 | 129 | 82 |
| 5.7 | 16.70 | 16.34 | 4.78 | .13 | 191 | 123 |
| 7.2 | 16.34 | 15.96 | 5.10 | .19 | 258 | 170 |
| 8.2 | 15.96 | 15.59 | 5.04 | .29 | 326 | 217 |
| 9.5 | 15.59 | 15.22 | 5.15 | .41 | 394 | 265 |
| 10.5 | 15.22 | 14.86 | 5.21 | .47 | 464 | 315 |
| 11.7 | 14.86 | 14.47 | 5.67 | .57 | 539 | 370 |
| 13.0 | 14.47 | 14.08 | 5.74 | .67 | 615 | 426 |
| 14.0 | 14.08 | 13.68 | 5.98 | .91 | 695 | 481 |
| 15.5 | 13.68 | 13.26 | 6.23 | .93 | 779 | 541 |
| 17.1 | 13.26 | 12.84 | 6.44 | 1.02 | 865 | 602 |
| 18.6 | 12.84 | 12.44 | 6.23 | 1.11 | 952 | 660 |
| 19.6 | 12.44 | 12.01 | 6.90 | 1.33 | 1047 | 723 |
| 21.4 | 12.01 | 11.56 | 7.17 | 1.49 | 1149 | 787 |
| 22.6 | 11.56 | 11.13 | 6.91 | 1.52 | 1247 | 848 |
| 24.2 | 11.13 | 10.69 | 7.24 | 1.81 | 1352 | 907 |
| 25.7 | 10.69 | 10.25 | 7.36 | 2.11 | 1455 | 964 |
| 27.2 | 10.25 | 9.82 | 7.35 | 2.32 | 1555 | 1018 |
| 28.7 | 9.82 | 9.38 | 7.41 | 2.55 | 1658 | 1068 |
| 30.2 | 9.38 | 8.90 | 8.40 | 3.36 | 1764 | 1119 |
| 32.3 | 8.90 | 8.46 | 7.97 | 3.49 | 1859 | 1163 |
| 34.0 | 8.46 | 8.02 | 8.04 | 3.70 | 1952 | 1205 |
| 36.0 | 8.02 | 7.54 | 8.96 | 4.46 | 2044 | 1248 |
| 38.3 | 7.54 | 7.04 | 9.48 | 5.12 | 2142 | 1287 |
| 40.8 | 7.04 | 6.58 | 9.18 | 5.15 | 2242 | 1320 |
| 42.8 | 6.58 | 6.13 | 8.94 | 5.10 | 2342 | 1352 |
| 45.1 | 6.13 | 5.66 | 9.90 | 5.96 | 2458 | 1381 |
| 47.7 | 5.66 | 5.15 | 10.86 | 7.03 | 2579 | 1406 |
| 51.7 | 5.15 | 4.66 | 11.05 | 7.63 | 2693 | 1424 |
| 54.8 | 4.66 | 4.20 | 10.75 | 7.72 | 2793 | 1439 |
| 58.1 | 4.20 | 3.71 | 11.69 | 9.03 | 2873 | 1449 |
| 62.5 | 3.71 | 3.19 | 13.20 | 10.94 | 2957 | 1448 |
| 66.9 | 3.19 | 2.68 | 13.42 | 11.76 | 3018 | 1439 |
| 71.7 | 2.68 | 2.22 | 12.79 | 12.94 | 3037 | 1402 |
| 77.6 | 2.22 | 1.74 | 13.83 | 13.19 | 3042 | 1383 |
| 85.7 | 1.74 | 1.25 | 15.18 | 14.39 | 3045 | 1365 |
| 98.7 | 1.25 | .75 | 15.99 | 14.41 | 3059 | 1358 |
| 114.2 | .75 | 0.00 | 25.15 | 21.34 | 3123 | 1366 |

RESULTATS (AVEC HC<0 CONSERVE)

FICHIER: 250911 FULL POWER 1
NOMBRE DE POINTS DE MESURE= 39

MESURES DE CHEMINEE (100% CHARGE BRULEE)

POIDS SEC= 17.6 KG
DUREE =135 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
3123 grammes
16.7 g/MJ
1388 g/Hre
HYDROCARBURES :
1366 grammes
7.3 g/MJ
607 g/Hre

INPUT : 348 MJ

OUTPUT : 187 MJ

PUISSANCE: 83 MJ/Hre

RENDEMENT:53.7 %

MESURES DE CHEMINEE (90.1% CHARGE BRULEE)

POIDS SEC= 15.8 KG
DUREE = 82 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
3042 grammes
22.3 g/MJ
2235 g/Hre
HYDROCARBURES :
1383 grammes
10.1 g/MJ
1016 g/Hre

INPUT : 291 MJ

OUTPUT : 137 MJ

PUISSANCE:100 MJ/Hre

RENDEMENT:46.9 %

MESURES AU PLENUM

| | | |
|---|---|---|
| FRACTION BRULEE | 95.8 % | 90.1 % |
| DUREE | 106 MIN | 82 MIN |
| DELTA T MOYEN | 36 C | 36 C |
| INPUT | 322 MJ | 291 MJ |
| OUTPUT | 150 MJ | 116 MJ |
| PUISSANCE: | 85 MJ/H | 85 MJ/H |
| RENDEMENT | 47 % | 40 % |

RESULTATS (AVEC HC<0 ELIMINE)

TITRE: FULL POWER 1
FICHIER: 250911

| TEMPS MIN. | P.INI KG | P.FIN KG | INPUT MJ | OUTPUT MJ | CO gr | HC gr |
|---|---|---|---|---|---|---|
| 2.7 | 17.56 | 17.02 | 6.80 | .04 | 79 | 50 |
| 4.2 | 17.02 | 16.70 | 4.04 | .06 | 129 | 82 |
| 5.7 | 16.70 | 16.34 | 4.78 | .13 | 191 | 123 |
| 7.2 | 16.34 | 15.96 | 5.10 | .19 | 258 | 170 |
| 8.2 | 15.96 | 15.59 | 5.04 | .29 | 326 | 217 |
| 9.5 | 15.59 | 15.22 | 5.15 | .41 | 394 | 265 |
| 10.5 | 15.22 | 14.86 | 5.21 | .47 | 464 | 315 |
| 11.7 | 14.86 | 14.47 | 5.67 | .57 | 539 | 370 |
| 13.0 | 14.47 | 14.08 | 5.74 | .67 | 615 | 426 |
| 14.0 | 14.08 | 13.68 | 5.98 | .91 | 695 | 481 |
| 15.5 | 13.68 | 13.26 | 6.23 | .93 | 779 | 541 |
| 17.1 | 13.26 | 12.84 | 6.44 | 1.02 | 865 | 602 |
| 18.6 | 12.84 | 12.44 | 6.23 | 1.11 | 952 | 660 |
| 19.6 | 12.44 | 12.01 | 6.90 | 1.33 | 1047 | 723 |
| 21.4 | 12.01 | 11.56 | 7.17 | 1.49 | 1149 | 787 |
| 22.6 | 11.56 | 11.13 | 6.91 | 1.52 | 1247 | 848 |
| 24.2 | 11.13 | 10.69 | 7.24 | 1.81 | 1352 | 907 |
| 25.7 | 10.69 | 10.25 | 7.36 | 2.11 | 1455 | 964 |
| 27.2 | 10.25 | 9.82 | 7.35 | 2.32 | 1555 | 1018 |
| 28.7 | 9.82 | 9.38 | 7.41 | 2.55 | 1658 | 1068 |
| 30.2 | 9.38 | 8.90 | 8.40 | 3.36 | 1764 | 1119 |
| 32.3 | 8.90 | 8.46 | 7.97 | 3.49 | 1859 | 1163 |
| 34.0 | 8.46 | 8.02 | 8.04 | 3.70 | 1952 | 1205 |
| 36.0 | 8.02 | 7.54 | 8.96 | 4.46 | 2044 | 1248 |
| 38.3 | 7.54 | 7.04 | 9.48 | 5.12 | 2142 | 1287 |
| 40.8 | 7.04 | 6.58 | 9.18 | 5.15 | 2242 | 1320 |
| 42.8 | 6.58 | 6.13 | 8.94 | 5.10 | 2342 | 1352 |
| 45.1 | 6.13 | 5.66 | 9.90 | 5.96 | 2458 | 1381 |
| 47.7 | 5.66 | 5.15 | 10.86 | 7.03 | 2579 | 1406 |
| 51.7 | 5.15 | 4.66 | 11.05 | 7.63 | 2693 | 1424 |
| 54.8 | 4.66 | 4.20 | 10.75 | 7.72 | 2793 | 1439 |
| 58.1 | 4.20 | 3.71 | 11.69 | 9.03 | 2873 | 1449 |
| 62.5 | 3.71 | 3.19 | 13.20 | 10.85 | 2957 | 1449 |
| 66.9 | 3.19 | 2.68 | 13.42 | 11.28 | 3018 | 1449 |
| 71.7 | 2.68 | 2.22 | 12.79 | 10.87 | 3037 | 1449 |
| 77.6 | 2.22 | 1.74 | 13.83 | 12.12 | 3042 | 1449 |
| 85.7 | 1.74 | 1.25 | 15.18 | 13.40 | 3045 | 1449 |
| 98.7 | 1.25 | .75 | 15.99 | 13.99 | 3059 | 1449 |
| 114.2 | .75 | 0.00 | 25.15 | 21.34 | 3123 | 1457 |

RESULTATS (AVEC HC<0 ELIMINE)

FICHIER: 250911 FULL POWER 1
NOMBRE DE POINTS DE MESURE= 39

MESURES DE CHEMINEE (100% CHARGE BRULEE)

POIDS SEC= 17.6 KG
DUREE =135 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
3123 grammes
17.2 g/MJ
1388 g/Hre

HYDROCARBURES :
1457 grammes
8.0 g/MJ
648 g/Hre

INPUT : 348 MJ

OUTPUT : 182 MJ

PUISSANCE: 81 MJ/Hre

RENDEMENT:52.2 %

MESURES DE CHEMINEE (90.1% CHARGE BRULEE)

POIDS SEC= 15.8 KG
DUREE = 82 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
3042 grammes
22.9 g/MJ
2235 g/Hre

HYDROCARBURES :
1449 grammes
10.9 g/MJ
1065 g/Hre

INPUT : 291 MJ

OUTPUT : 133 MJ

PUISSANCE: 98 MJ/Hre

RENDEMENT:45.6 %

MESURES AU PLENUM

| | | |
|---|---|---|
| FRACTION BRULEE | 95.8 % | 90.1 % |
| DUREE | 106 MIN | 82 MIN |
| DELTA T MOYEN | 36 C | 36 C |
| INPUT | 322 MJ | 291 MJ |
| OUTPUT | 150 MJ | 116 MJ |
| PUISSANCE: | 85 MJ/H | 85 MJ/H |
| RENDEMENT | 47 % | 40 % |

# MESURES

FICHIER: 250914
TITRE: FULL POWER 2
POIDS INITIAL (BASE HUMIDE)=20.64KG
HUMIDITE DU BOIS=17%
POIDS INTIAL (BASE SECHE)17.13KG
INTERVALLE DE LECTURE [%] 2.5
NBRE. DE LECTURES AU CHANGEMENT D'ETAT 1

| TEMPS MIN. | POIDS KG | T.CH. C | T.AMB C | CO2 % | CO % | O2 % |
|---|---|---|---|---|---|---|
| 2.1 | 20.05 | 135.6 | 24.7 | 14.11 | 4.66 | 5.81 |
| 3.6 | 19.59 | 152.0 | 24.5 | 15.02 | 6.06 | 4.61 |
| 5.1 | 19.02 | 166.0 | 24.7 | 15.46 | 6.37 | 3.76 |
| 6.4 | 18.54 | 178.0 | 24.7 | 15.52 | 5.63 | 3.84 |
| 7.9 | 17.98 | 188.9 | 24.8 | 15.84 | 5.66 | 3.64 |
| 9.2 | 17.50 | 197.1 | 24.2 | 16.09 | 5.95 | 3.21 |
| 10.4 | 17.01 | 208.0 | 23.6 | 16.16 | 6.49 | 3.05 |
| 11.9 | 16.40 | 216.9 | 23.8 | 16.28 | 6.73 | 2.84 |
| 13.2 | 15.89 | 220.7 | 24.3 | 16.25 | 7.30 | 2.97 |
| 14.5 | 15.44 | 219.9 | 24.6 | 16.28 | 6.72 | 2.90 |
| 15.7 | 14.91 | 219.3 | 24.6 | 16.31 | 6.78 | 2.83 |
| 17.2 | 14.35 | 218.2 | 24.6 | 16.43 | 6.67 | 2.66 |
| 18.5 | 13.88 | 215.8 | 24.8 | 16.26 | 6.95 | 2.67 |
| 20.0 | 13.37 | 210.4 | 24.6 | 16.41 | 7.16 | 2.65 |
| 21.5 | 12.81 | 205.8 | 24.6 | 16.17 | 7.27 | 2.68 |
| 23.0 | 12.27 | 203.0 | 24.0 | 16.16 | 6.96 | 2.69 |
| 24.3 | 11.86 | 202.1 | 24.1 | 16.17 | 6.67 | 2.69 |
| 26.0 | 11.31 | 201.5 | 24.5 | 16.26 | 6.32 | 2.51 |
| 27.8 | 10.82 | 200.4 | 24.8 | 16.11 | 6.14 | 2.45 |
| 29.6 | 10.32 | 200.8 | 24.7 | 16.22 | 5.72 | 2.40 |
| 31.8 | 9.73 | 201.5 | 24.5 | 16.85 | 3.73 | 2.45 |
| 33.8 | 9.27 | 200.9 | 24.5 | 16.97 | 3.16 | 2.66 |
| 36.4 | 8.72 | 205.2 | 24.2 | 16.85 | 2.67 | 2.64 |
| 38.4 | 8.24 | 207.2 | 24.2 | 17.00 | 3.07 | 2.57 |
| 41.5 | 7.69 | 206.2 | 24.5 | 16.85 | 3.13 | 2.52 |
| 44.0 | 7.20 | 203.6 | 25.0 | 17.23 | 2.90 | 2.40 |
| 46.3 | 6.66 | 202.8 | 25.0 | 17.07 | 2.77 | 2.35 |
| 48.6 | 6.18 | 201.6 | 24.4 | 17.18 | 2.53 | 2.36 |
| 51.4 | 5.65 | 202.3 | 24.9 | 17.36 | 2.40 | 2.28 |
| 54.7 | 5.12 | 203.5 | 23.9 | 17.23 | 2.10 | 2.51 |
| 57.5 | 4.57 | 204.0 | 24.4 | 17.36 | 1.69 | 2.45 |
| 61.2 | 4.06 | 204.8 | 24.0 | 17.21 | 1.66 | 2.41 |
| 65.6 | 3.60 | 204.6 | 24.7 | 16.30 | 1.30 | 2.72 |
| 70.4 | 3.03 | 210.9 | 24.2 | 14.45 | .58 | 5.28 |
| 76.0 | 2.58 | 206.0 | 24.3 | 13.86 | .60 | 6.21 |
| 83.9 | 2.04 | 192.4 | 24.9 | 12.52 | .20 | 7.68 |
| 92.1 | 1.52 | 176.9 | 24.9 | 11.76 | .17 | 8.62 |
| 102.9 | 1.00 | 166.7 | 25.0 | 11.03 | .15 | 9.29 |
| 115.3 | .51 | 156.3 | 24.9 | 9.70 | .26 | 10.95 |

RESULTATS (AVEC HC<0 CONSERVE)

TITRE: FULL POWER 2
FICHIER: 250914

| TEMPS MIN. | P.INI KG | P.FIN KG | INPUT MJ | OUTPUT MJ | CO gr | HC gr |
|---|---|---|---|---|---|---|
| 2.1 | 17.13 | 16.62 | 6.45 | .22 | 69 | 48 |
| 3.6 | 16.62 | 16.28 | 4.29 | .10 | 121 | 83 |
| 5.1 | 16.28 | 15.94 | 4.56 | .28 | 178 | 121 |
| 6.4 | 15.94 | 15.59 | 4.70 | .46 | 232 | 160 |
| 7.9 | 15.59 | 15.22 | 4.97 | .53 | 287 | 204 |
| 9.2 | 15.22 | 14.88 | 4.82 | .57 | 343 | 246 |
| 10.4 | 14.88 | 14.48 | 5.61 | .63 | 410 | 298 |
| 11.9 | 14.48 | 14.07 | 5.94 | .72 | 482 | 354 |
| 13.2 | 14.07 | 13.71 | 5.32 | .58 | 549 | 406 |
| 14.5 | 13.71 | 13.34 | 5.56 | .80 | 617 | 458 |
| 15.7 | 13.34 | 12.92 | 6.35 | 1.01 | 694 | 517 |
| 17.2 | 12.92 | 12.52 | 6.19 | 1.14 | 768 | 574 |
| 18.5 | 12.52 | 12.13 | 6.04 | 1.19 | 843 | 628 |
| 20.0 | 12.13 | 11.70 | 6.77 | 1.38 | 927 | 689 |
| 21.5 | 11.70 | 11.25 | 7.15 | 1.64 | 1019 | 750 |
| 23.0 | 11.25 | 10.86 | 6.36 | 1.67 | 1100 | 802 |
| 24.3 | 10.86 | 10.46 | 6.53 | 1.89 | 1181 | 852 |
| 26.0 | 10.46 | 10.03 | 7.21 | 2.40 | 1268 | 903 |
| 27.8 | 10.03 | 9.61 | 7.10 | 2.64 | 1354 | 948 |
| 29.6 | 9.61 | 9.14 | 8.03 | 3.30 | 1449 | 995 |
| 31.8 | 9.14 | 8.69 | 7.89 | 3.96 | 1515 | 1032 |
| 33.8 | 8.69 | 8.26 | 7.78 | 4.15 | 1573 | 1066 |
| 36.4 | 8.26 | 7.81 | 8.24 | 4.93 | 1628 | 1092 |
| 38.4 | 7.81 | 7.35 | 8.53 | 5.02 | 1691 | 1122 |
| 41.5 | 7.35 | 6.89 | 8.79 | 5.49 | 1760 | 1146 |
| 44.0 | 6.89 | 6.43 | 8.96 | 5.77 | 1824 | 1170 |
| 46.3 | 6.43 | 5.97 | 9.31 | 6.42 | 1892 | 1187 |
| 48.6 | 5.97 | 5.51 | 9.59 | 6.86 | 1956 | 1202 |
| 51.4 | 5.51 | 5.03 | 10.40 | 7.64 | 2023 | 1216 |
| 54.7 | 5.03 | 4.54 | 11.08 | 8.44 | 2089 | 1228 |
| 57.5 | 4.54 | 4.05 | 11.42 | 9.20 | 2145 | 1233 |
| 61.2 | 4.05 | 3.60 | 10.86 | 9.08 | 2200 | 1231 |
| 65.6 | 3.60 | 3.12 | 12.01 | 11.43 | 2256 | 1203 |
| 70.4 | 3.12 | 2.65 | 12.58 | 11.97 | 2286 | 1176 |
| 76.0 | 2.65 | 2.18 | 12.81 | 11.62 | 2319 | 1162 |
| 83.9 | 2.18 | 1.69 | 14.37 | 13.69 | 2333 | 1138 |
| 92.1 | 1.69 | 1.20 | 14.91 | 13.92 | 2347 | 1122 |
| 102.9 | 1.20 | .72 | 15.38 | 14.70 | 2361 | 1100 |
| 115.3 | .72 | 0.00 | 24.17 | 20.94 | 2400 | 1107 |

RESULTATS (AVEC HC<0 CONSERVE)

FICHIER: 250914 FULL POWER 2
NOMBRE DE POINTS DE MESURE= 39

MESURES DE CHEMINEE (100% CHARGE BRULEE)

POIDS SEC= 17.1 KG
DUREE =135 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
2400 grammes
12.1 g/MJ
1066 g/Hre

HYDROCARBURES :
1107 grammes
5.6 g/MJ
492 g/Hre

INPUT : 339 MJ

OUTPUT : 198 MJ

PUISSANCE: 88 MJ/Hre

RENDEMENT:58.5 %

MESURES DE CHEMINEE (90.2% CHARGE BRULEE)

POIDS SEC= 15.4 KG
DUREE = 88 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
2333 grammes
15.7 g/MJ
1591 g/Hre

HYDROCARBURES :
1138 grammes
7.6 g/MJ
776 g/Hre

INPUT : 285 MJ

OUTPUT : 149 MJ

PUISSANCE:101 MJ/Hre

RENDEMENT:52.3 %

MESURES AU PLENUM

| | | |
|---|---|---|
| FRACTION BRULEE | 95.8 % | 90.2 % |
| DUREE | 109 MIN | 88 MIN |
| DELTA T MOYEN | 36 C | 36 C |
| INPUT | 315 MJ | 285 MJ |
| OUTPUT | 152 MJ | 125 MJ |
| PUISSANCE: | 84 MJ/H | 85 MJ/H |
| RENDEMENT | 48 % | 44 % |

RESULTATS (AVEC HC<0 ELIMINE)

TITRE: FULL POWER 2
FICHIER: 250914

| TEMPS MIN. | P.INI KG | P.FIN KG | INPUT MJ | OUTPUT MJ | CO gr | HC gr |
|---|---|---|---|---|---|---|
| 2.1 | 17.13 | 16.62 | 6.45 | .22 | 69 | 48 |
| 3.6 | 16.62 | 16.28 | 4.29 | .10 | 121 | 83 |
| 5.1 | 16.28 | 15.94 | 4.56 | .28 | 178 | 121 |
| 6.4 | 15.94 | 15.59 | 4.70 | .46 | 232 | 160 |
| 7.9 | 15.59 | 15.22 | 4.97 | .53 | 287 | 204 |
| 9.2 | 15.22 | 14.88 | 4.82 | .57 | 343 | 246 |
| 10.4 | 14.88 | 14.48 | 5.61 | .63 | 410 | 298 |
| 11.9 | 14.48 | 14.07 | 5.94 | .72 | 482 | 354 |
| 13.2 | 14.07 | 13.71 | 5.32 | .58 | 549 | 406 |
| 14.5 | 13.71 | 13.34 | 5.56 | .80 | 617 | 458 |
| 15.7 | 13.34 | 12.92 | 6.35 | 1.01 | 694 | 517 |
| 17.2 | 12.92 | 12.52 | 6.19 | 1.14 | 768 | 574 |
| 18.5 | 12.52 | 12.13 | 6.04 | 1.19 | 843 | 628 |
| 20.0 | 12.13 | 11.70 | 6.77 | 1.38 | 927 | 689 |
| 21.5 | 11.70 | 11.25 | 7.15 | 1.64 | 1019 | 750 |
| 23.0 | 11.25 | 10.86 | 6.36 | 1.67 | 1100 | 802 |
| 24.3 | 10.86 | 10.46 | 6.53 | 1.89 | 1181 | 852 |
| 26.0 | 10.46 | 10.03 | 7.21 | 2.40 | 1268 | 903 |
| 27.8 | 10.03 | 9.61 | 7.10 | 2.64 | 1354 | 948 |
| 29.6 | 9.61 | 9.14 | 8.03 | 3.30 | 1449 | 995 |
| 31.8 | 9.14 | 8.69 | 7.89 | 3.96 | 1515 | 1032 |
| 33.8 | 8.69 | 8.26 | 7.78 | 4.15 | 1573 | 1066 |
| 36.4 | 8.26 | 7.81 | 8.24 | 4.93 | 1628 | 1092 |
| 38.4 | 7.81 | 7.35 | 8.53 | 5.02 | 1691 | 1122 |
| 41.5 | 7.35 | 6.89 | 8.79 | 5.49 | 1760 | 1146 |
| 44.0 | 6.89 | 6.43 | 8.96 | 5.77 | 1824 | 1170 |
| 46.3 | 6.43 | 5.97 | 9.31 | 6.42 | 1892 | 1187 |
| 48.6 | 5.97 | 5.51 | 9.59 | 6.86 | 1956 | 1202 |
| 51.4 | 5.51 | 5.03 | 10.40 | 7.64 | 2023 | 1216 |
| 54.7 | 5.03 | 4.54 | 11.08 | 8.44 | 2089 | 1228 |
| 57.5 | 4.54 | 4.05 | 11.42 | 9.20 | 2145 | 1233 |
| 61.2 | 4.05 | 3.60 | 10.86 | 9.01 | 2200 | 1233 |
| 65.6 | 3.60 | 3.12 | 12.01 | 9.81 | 2256 | 1233 |
| 70.4 | 3.12 | 2.65 | 12.58 | 10.48 | 2286 | 1233 |
| 76.0 | 2.65 | 2.18 | 12.81 | 10.83 | 2319 | 1233 |
| 83.9 | 2.18 | 1.69 | 14.37 | 12.34 | 2333 | 1233 |
| 92.1 | 1.69 | 1.20 | 14.91 | 13.01 | 2347 | 1233 |
| 102.9 | 1.20 | .72 | 15.38 | 13.46 | 2361 | 1233 |
| 115.3 | .72 | 0.00 | 24.17 | 20.94 | 2400 | 1241 |

RESULTATS (AVEC HC<0 ELIMINE)

FICHIER: 250914 · FULL POWER 2
NOMBRE DE POINTS DE MESURE= 39

MESURES DE CHEMINEE (100% CHARGE BRULEE)

POIDS SEC= 17.1 KG
DUREE =135 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
2400 grammes
12.6 g/MJ
1066 g/Hre
HYDROCARBURES :
1241 grammes
6.5 g/MJ
551 g/Hre

INPUT : 339 MJ

OUTPUT : 191 MJ

PUISSANCE: 85 MJ/Hre

RENDEMENT:56.3 %

MESURES DE CHEMINEE (90.2% CHARGE BRULEE)

POIDS SEC= 15.4 KG
DUREE = 88 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
2333 grammes
16.3 g/MJ
1591 g/Hre
HYDROCARBURES :
1233 grammes
8.6 g/MJ
841 g/Hre

INPUT : 285 MJ

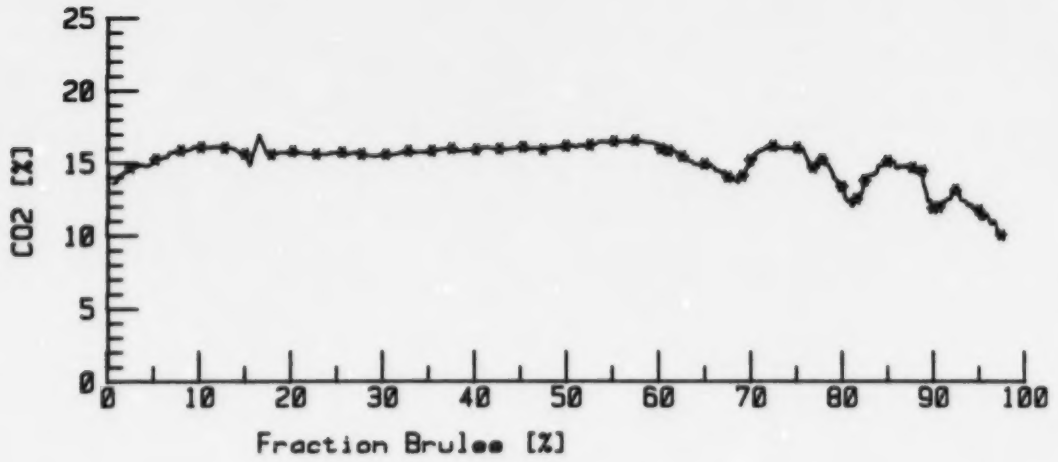
OUTPUT : 144 MJ

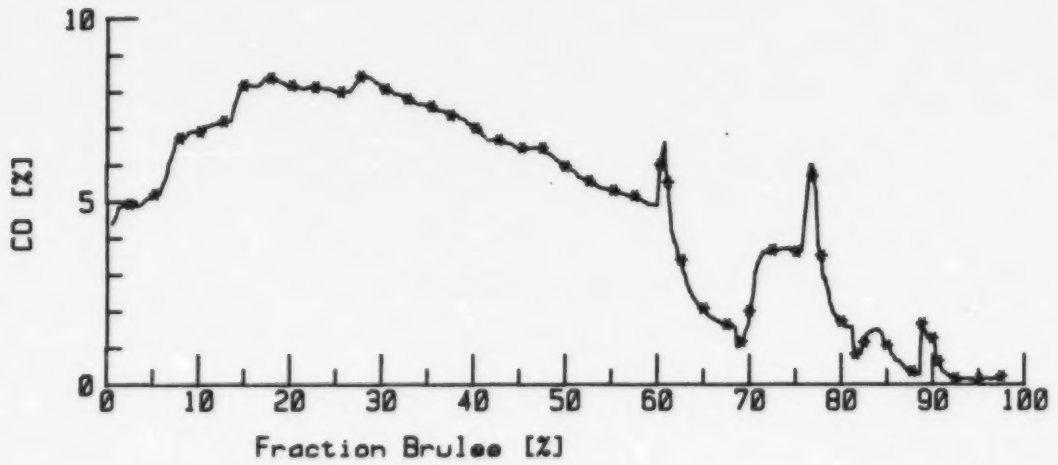
PUISSANCE: 98 MJ/Hre

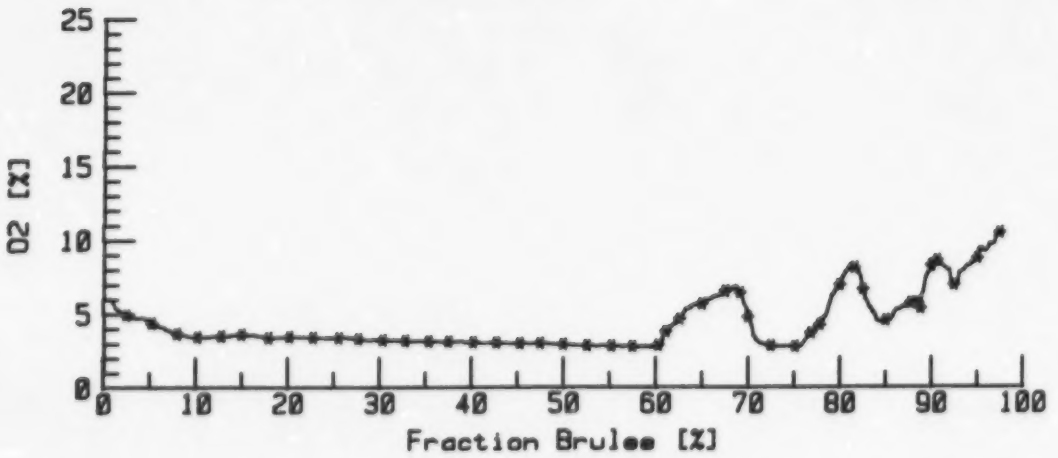
RENDEMENT:50.4 %

MESURES AU PLENUM

| | | |
|---|---|---|
| FRACTION BRULEE | 95.8 % | 90.2 % |
| DUREE | 109 MIN | 88 MIN |
| DELTA T MOYEN | 36 C | 36 C |
| INPUT | 315 MJ | 285 MJ |
| OUTPUT | 152 MJ | 125 MJ |
| PUISSANCE: | 84 MJ/H | 85 MJ/H |
| RENDEMENT | 48 % | 44 % |




Fichier: 110914 Titre: 20KW-2
Intervalle de lecture [poids %]: 2.5
Nbre de lectures au changement d'etat: 1

MESURES

FICHIER: 110914
TITRE: 20KW-2
POIDS INITIAL (BASE HUMIDE)=21.05KG
HUMIDITE DU BOIS=17%
POIDS INTIAL (BASE SECHE)17.47KG
INTERVALLE DE LECTURE [%] 2.5
NBRE. DE LECTURES AU CHANGEMENT D'ETAT 1

| TEMPS MIN. | POIDS KG | T.CH. C | T.AMB C | CO2 % | CO % | O2 % |
|---|---|---|---|---|---|---|
| 1.6 | 20.52 | 185.1 | 19.7 | 14.69 | 4.94 | 4.94 |
| 3.6 | 19.94 | 196.1 | 19.5 | 15.27 | 5.20 | 4.38 |
| 5.4 | 19.36 | 203.2 | 19.8 | 15.86 | 6.74 | 3.67 |
| 6.6 | 18.90 | 206.4 | 20.6 | 16.09 | 6.92 | 3.45 |
| 7.9 | 18.35 | 208.7 | 20.9 | 16.05 | 7.20 | 3.51 |
| 8.9 | 17.89 | 209.0 | 21.2 | 15.64 | 8.18 | 3.62 |
| 10.2 | 17.27 | 205.9 | 21.1 | 15.60 | 8.37 | 3.39 |
| 11.2 | 16.79 | 203.3 | 21.5 | 15.79 | 8.18 | 3.46 |
| 12.5 | 16.25 | 201.3 | 21.7 | 15.62 | 8.12 | 3.42 |
| 13.7 | 15.66 | 200.5 | 21.4 | 15.71 | 7.99 | 3.38 |
| 14.7 | 15.22 | 200.4 | 20.6 | 15.60 | 8.41 | 3.32 |
| 16.0 | 14.65 | 200.5 | 19.6 | 15.58 | 8.06 | 3.23 |
| 17.3 | 14.13 | 200.2 | 19.9 | 15.81 | 7.80 | 3.19 |
| 18.5 | 13.59 | 200.4 | 19.3 | 15.83 | 7.59 | 3.14 |
| 19.8 | 13.14 | 200.4 | 20.8 | 15.99 | 7.35 | 3.11 |
| 21.3 | 12.58 | 200.7 | 21.1 | 15.91 | 7.00 | 3.07 |
| 22.8 | 12.05 | 200.9 | 21.4 | 15.95 | 6.68 | 3.05 |
| 24.4 | 11.51 | 201.4 | 21.7 | 16.09 | 6.46 | 3.01 |
| 25.9 | 11.05 | 202.2 | 20.9 | 15.90 | 6.45 | 3.01 |
| 27.6 | 10.52 | 202.1 | 20.7 | 16.17 | 5.95 | 2.94 |
| 29.4 | 9.98 | 202.7 | 20.9 | 16.25 | 5.56 | 2.85 |
| 31.4 | 9.42 | 204.0 | 20.8 | 16.50 | 5.30 | 2.83 |
| 33.2 | 8.94 | 205.6 | 20.2 | 16.56 | 5.15 | 2.80 |
| 35.4 | 8.36 | 207.3 | 20.4 | 15.98 | 6.01 | 2.87 |
| 36.2 | 8.18 | 205.4 | 20.7 | 15.84 | 5.53 | 3.80 |
| 38.2 | 7.87 | 183.3 | 21.8 | 15.45 | 3.40 | 4.66 |
| 41.9 | 7.36 | 152.0 | 22.1 | 14.95 | 2.07 | 5.68 |
| 48.0 | 6.83 | 122.5 | 21.7 | 14.02 | 1.64 | 6.54 |
| 51.5 | 6.49 | 114.8 | 21.9 | 14.11 | 1.17 | 6.44 |
| 52.7 | 6.31 | 125.2 | 21.9 | 15.18 | 2.00 | 4.80 |
| 56.3 | 5.79 | 162.4 | 23.2 | 16.15 | 3.67 | 2.85 |
| 59.3 | 5.23 | 181.6 | 23.6 | 16.03 | 3.63 | 2.79 |
| 61.7 | 4.87 | 187.7 | 23.7 | 14.67 | 5.70 | 3.71 |
| 62.9 | 4.66 | 176.1 | 23.8 | 15.20 | 3.52 | 4.24 |
| 68.5 | 4.20 | 136.4 | 24.1 | 13.34 | 1.72 | 6.98 |
| 73.7 | 3.87 | 114.3 | 24.3 | 12.51 | .83 | 8.14 |
| 75.8 | 3.67 | 123.7 | 24.4 | 13.77 | 1.15 | 6.68 |
| 81.0 | 3.15 | 175.6 | 24.4 | 15.07 | 1.07 | 4.57 |
| 86.8 | 2.57 | 199.6 | 24.5 | 14.64 | .36 | 5.74 |
| 90.3 | 2.35 | 198.9 | 24.7 | 14.42 | 1.66 | 5.38 |
| 96.6 | 2.10 | 133.7 | 24.9 | 11.87 | 1.26 | 8.27 |
| 98.4 | 1.97 | 124.1 | 25.0 | 11.94 | .64 | 8.63 |
| 104.2 | 1.58 | 151.6 | 24.9 | 13.10 | .17 | 6.98 |
| 115.7 | 1.04 | 175.5 | 25.1 | 11.73 | .13 | 8.76 |
| 128.4 | .52 | 162.8 | 25.1 | 10.05 | .23 | 10.51 |

RESULTATS (AVEC HC<0 CONSERVE)

TITRE: 20KW-2
FICHIER: 110914

| TEMPS MIN. | P.INI KG | P.FIN KG | INPUT MJ | OUTPUT MJ | CO gr | HC gr |
|---|---|---|---|---|---|---|
| 1.6 | 17.47 | 16.96 | 6.41 | .06 | 71 | 45 |
| 3.6 | 16.96 | 16.58 | 4.83 | .19 | 124 | 82 |
| 5.4 | 16.58 | 16.24 | 4.57 | .09 | 181 | 123 |
| 6.6 | 16.24 | 15.90 | 4.60 | .15 | 238 | 165 |
| 7.9 | 15.90 | 15.55 | 4.80 | .19 | 298 | 212 |
| 8.9 | 15.55 | 15.16 | 5.34 | .16 | 372 | 266 |
| 10.2 | 15.16 | 14.77 | 5.63 | .30 | 451 | 323 |
| 11.2 | 14.77 | 14.39 | 5.45 | .35 | 526 | 379 |
| 12.5 | 14.39 | 13.97 | 6.21 | .54 | 611 | 442 |
| 13.7 | 13.97 | 13.58 | 5.87 | .62 | 690 | 501 |
| 14.7 | 13.58 | 13.19 | 5.91 | .66 | 773 | 561 |
| 16.0 | 13.19 | 12.77 | 6.49 | .93 | 863 | 623 |
| 17.3 | 12.77 | 12.35 | 6.52 | 1.06 | 950 | 685 |
| 18.5 | 12.35 | 11.95 | 6.26 | 1.19 | 1033 | 743 |
| 19.8 | 11.95 | 11.54 | 6.54 | 1.37 | 1117 | 802 |
| 21.3 | 11.54 | 11.09 | 7.29 | 1.81 | 1210 | 863 |
| 22.8 | 11.09 | 10.64 | 7.30 | 2.05 | 1300 | 921 |
| 24.4 | 10.64 | 10.23 | 6.95 | 2.14 | 1385 | 973 |
| 25.9 | 10.23 | 9.81 | 7.07 | 2.37 | 1472 | 1023 |
| 27.6 | 9.81 | 9.35 | 7.88 | 2.91 | 1565 | 1075 |
| 29.4 | 9.35 | 8.88 | 8.28 | 3.41 | 1658 | 1125 |
| 31.4 | 8.88 | 8.43 | 8.02 | 3.50 | 1746 | 1170 |
| 33.2 | 8.43 | 7.96 | 8.50 | 3.93 | 1837 | 1215 |
| 35.4 | 7.96 | 7.63 | 6.27 | 2.95 | 1916 | 1246 |
| 36.2 | 7.63 | 7.41 | 4.09 | 1.85 | 1963 | 1268 |
| 38.2 | 7.41 | 7.05 | 6.96 | 3.78 | 2022 | 1299 |
| 41.9 | 7.05 | 6.58 | 9.14 | 5.60 | 2075 | 1334 |
| 48.0 | 6.58 | 6.19 | 7.89 | 5.33 | 2117 | 1357 |
| 51.5 | 6.19 | 5.96 | 4.75 | 3.49 | 2135 | 1368 |
| 52.7 | 5.96 | 5.64 | 6.66 | 4.86 | 2175 | 1380 |
| 56.3 | 5.64 | 5.15 | 10.59 | 7.45 | 2279 | 1397 |
| 59.3 | 5.15 | 4.73 | 9.40 | 6.85 | 2373 | 1407 |
| 61.7 | 4.73 | 4.47 | 6.00 | 3.72 | 2461 | 1421 |
| 62.9 | 4.47 | 4.16 | 7.12 | 4.91 | 2532 | 1435 |
| 68.5 | 4.16 | 3.79 | 8.82 | 6.65 | 2587 | 1450 |
| 73.7 | 3.79 | 3.55 | 6.08 | 4.97 | 2608 | 1457 |
| 75.8 | 3.55 | 3.21 | 8.46 | 6.89 | 2645 | 1466 |
| 81.0 | 3.21 | 2.70 | 13.49 | 12.38 | 2699 | 1448 |
| 86.8 | 2.70 | 2.33 | 10.36 | 9.30 | 2714 | 1443 |
| 90.3 | 2.33 | 2.11 | 6.24 | 5.16 | 2753 | 1444 |
| 96.6 | 2.11 | 1.93 | 5.16 | 4.32 | 2782 | 1446 |
| 98.4 | 1.93 | 1.68 | 7.23 | 6.22 | 2804 | 1451 |
| 104.2 | 1.68 | 1.24 | 13.28 | 13.34 | 2815 | 1423 |
| 115.7 | 1.24 | .74 | 16.00 | 14.75 | 2826 | 1412 |
| 128.4 | .74 | 0.00 | 25.08 | 22.36 | 2862 | 1407 |

RESULTATS (AVEC HC<0 CONSERVE)

FICHIER: 110914 20KW-2
NOMBRE DE POINTS DE MESURE= 45

MESURES DE CHEMINEE (100% CHARGE BRULEE)

POIDS SEC= 17.5 KG
DUREE =165 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
2862 grammes
15.3 g/MJ
1041 g/Hre
HYDROCARBURES :
1407 grammes
7.5 g/MJ
512 g/Hre

INPUT : 346 MJ

OUTPUT : 187 MJ

PUISSANCE: 68 MJ/Hre

RENDEMENT:54.1 %

MESURES DE CHEMINEE (90.4% CHARGE BRULEE)

POIDS SEC= 15.8 KG
DUREE =101 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
2804 grammes
20.5 g/MJ
1661 g/Hre
HYDROCARBURES :
1451 grammes
10.6 g/MJ
859 g/Hre

INPUT : 291 MJ

OUTPUT : 137 MJ

PUISSANCE: 81 MJ/Hre

RENDEMENT:46.9 %

MESURES AU PLENUM

| | | |
|---|---|---|
| FRACTION BRULEE | 95.7 % | 90.4 % |
| DUREE | 122 MIN | 101 MIN |
| DELTA T MOYEN | 29 C | 29 C |
| INPUT | 321 MJ | 291 MJ |
| OUTPUT | 145 MJ | 121 MJ |
| PUISSANCE: | 71 MJ/H | 72 MJ/H |
| RENDEMENT | 45 % | 42 % |

RESULTATS (AVEC HC<0 ELIMINE)

TITRE: 20KW-2
FICHIER: 110914

| TEMPS MIN. | P.INI KG | P.FIN KG | INPUT MJ | OUTPUT MJ | CO gr | HC gr |
|---|---|---|---|---|---|---|
| 1.6 | 17.47 | 16.96 | 6.41 | .06 | 71 | 45 |
| 3.6 | 16.96 | 16.58 | 4.83 | .19 | 124 | 82 |
| 5.4 | 16.58 | 16.24 | 4.57 | .09 | 181 | 123 |
| 6.6 | 16.24 | 15.90 | 4.60 | .15 | 238 | 165 |
| 7.9 | 15.90 | 15.55 | 4.80 | .19 | 298 | 212 |
| 8.9 | 15.55 | 15.16 | 5.34 | .16 | 372 | 266 |
| 10.2 | 15.16 | 14.77 | 5.63 | .30 | 451 | 323 |
| 11.2 | 14.77 | 14.39 | 5.45 | .35 | 526 | 379 |
| 12.5 | 14.39 | 13.97 | 6.21 | .54 | 611 | 442 |
| 13.7 | 13.97 | 13.58 | 5.87 | .62 | 690 | 501 |
| 14.7 | 13.58 | 13.19 | 5.91 | .66 | 773 | 561 |
| 16.0 | 13.19 | 12.77 | 6.49 | .93 | 863 | 623 |
| 17.3 | 12.77 | 12.35 | 6.52 | 1.06 | 950 | 685 |
| 18.5 | 12.35 | 11.95 | 6.26 | 1.19 | 1033 | 743 |
| 19.8 | 11.95 | 11.54 | 6.54 | 1.37 | 1117 | 802 |
| 21.3 | 11.54 | 11.09 | 7.29 | 1.81 | 1210 | 863 |
| 22.8 | 11.09 | 10.64 | 7.30 | 2.05 | 1300 | 921 |
| 24.4 | 10.64 | 10.23 | 6.95 | 2.14 | 1385 | 973 |
| 25.9 | 10.23 | 9.81 | 7.07 | 2.37 | 1472 | 1023 |
| 27.6 | 9.81 | 9.35 | 7.88 | 2.91 | 1565 | 1075 |
| 29.4 | 9.35 | 8.88 | 8.28 | 3.41 | 1658 | 1125 |
| 31.4 | 8.88 | 8.43 | 8.02 | 3.50 | 1746 | 1170 |
| 33.2 | 8.43 | 7.96 | 8.50 | 3.93 | 1837 | 1215 |
| 35.4 | 7.96 | 7.63 | 6.27 | 2.95 | 1916 | 1246 |
| 36.2 | 7.63 | 7.41 | 4.09 | 1.85 | 1963 | 1268 |
| 38.2 | 7.41 | 7.05 | 6.96 | 3.78 | 2022 | 1299 |
| 41.9 | 7.05 | 6.58 | 9.14 | 5.60 | 2075 | 1334 |
| 48.0 | 6.58 | 6.19 | 7.89 | 5.33 | 2117 | 1357 |
| 51.5 | 6.19 | 5.96 | 4.75 | 3.49 | 2135 | 1368 |
| 52.7 | 5.96 | 5.64 | 6.66 | 4.86 | 2175 | 1380 |
| 56.3 | 5.64 | 5.15 | 10.59 | 7.45 | 2279 | 1397 |
| 59.3 | 5.15 | 4.73 | 9.40 | 6.85 | 2373 | 1407 |
| 61.7 | 4.73 | 4.47 | 6.00 | 3.72 | 2461 | 1421 |
| 62.9 | 4.47 | 4.16 | 7.12 | 4.91 | 2532 | 1435 |
| 68.5 | 4.16 | 3.79 | 8.82 | 6.65 | 2587 | 1450 |
| 73.7 | 3.79 | 3.55 | 6.08 | 4.97 | 2608 | 1457 |
| 75.8 | 3.55 | 3.21 | 8.46 | 6.89 | 2645 | 1466 |
| 81.0 | 3.21 | 2.70 | 13.49 | 11.40 | 2699 | 1466 |
| 86.8 | 2.70 | 2.33 | 10.36 | 8.99 | 2714 | 1466 |
| 90.3 | 2.33 | 2.11 | 6.24 | 5.16 | 2753 | 1467 |
| 96.6 | 2.11 | 1.93 | 5.16 | 4.32 | 2782 | 1469 |
| 98.4 | 1.93 | 1.68 | 7.23 | 6.22 | 2804 | 1474 |
| 104.2 | 1.68 | 1.24 | 13.28 | 11.79 | 2815 | 1474 |
| 115.7 | 1.24 | .74 | 16.00 | 14.14 | 2826 | 1474 |
| 128.4 | .74 | 0.00 | 25.08 | 22.08 | 2862 | 1474 |

RESULTATS (AVEC HC<0 ELIMINE)

FICHIER: 110914 20KW-2
NOMBRE DE POINTS DE MESURE= 45

MESURES DE CHEMINEE (100% CHARGE BRULEE)

POIDS SEC= 17.5 KG
DUREE =165 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
2862 grammes
15.6 g/MJ
1041 g/Hre

HYDROCARBURES :
1474 grammes
8.0 g/MJ
536 g/Hre

INPUT : 346 MJ

OUTPUT : 183 MJ

PUISSANCE: 67 MJ/Hre

RENDEMENT:53.0 %

MESURES DE CHEMINEE (90.4% CHARGE BRULEE)

POIDS SEC= 15.8 KG
DUREE =101 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
2804 grammes
20.7 g/MJ
1661 g/Hre

HYDROCARBURES :
1474 grammes
10.9 g/MJ
873 g/Hre

INPUT : 291 MJ

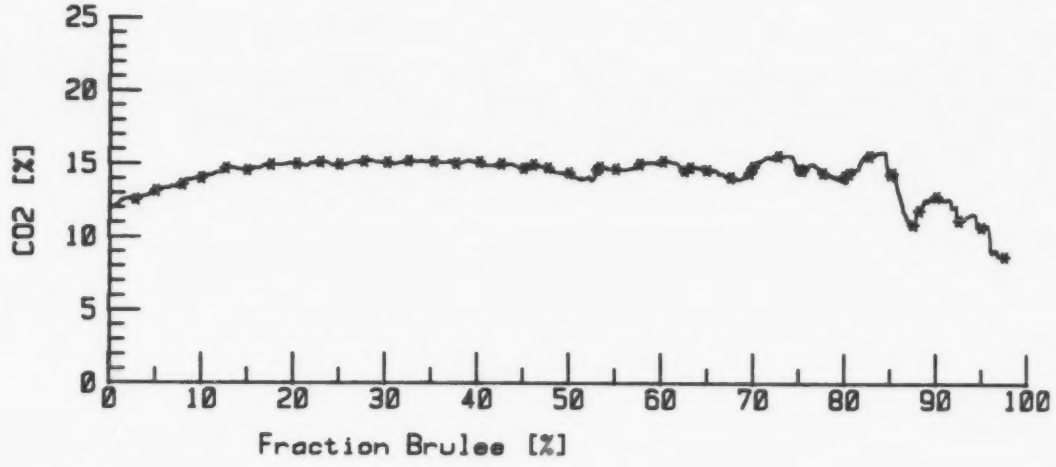
OUTPUT : 135 MJ

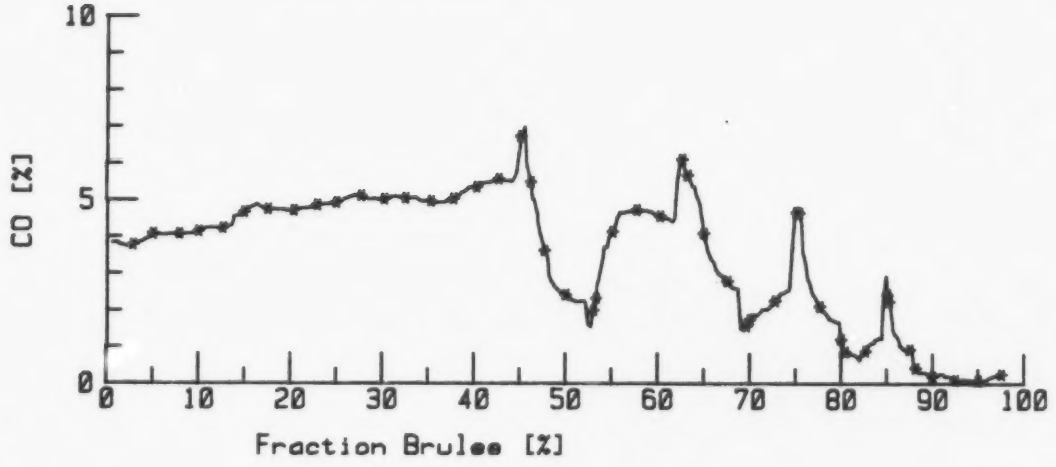
PUISSANCE: 80 MJ/Hre

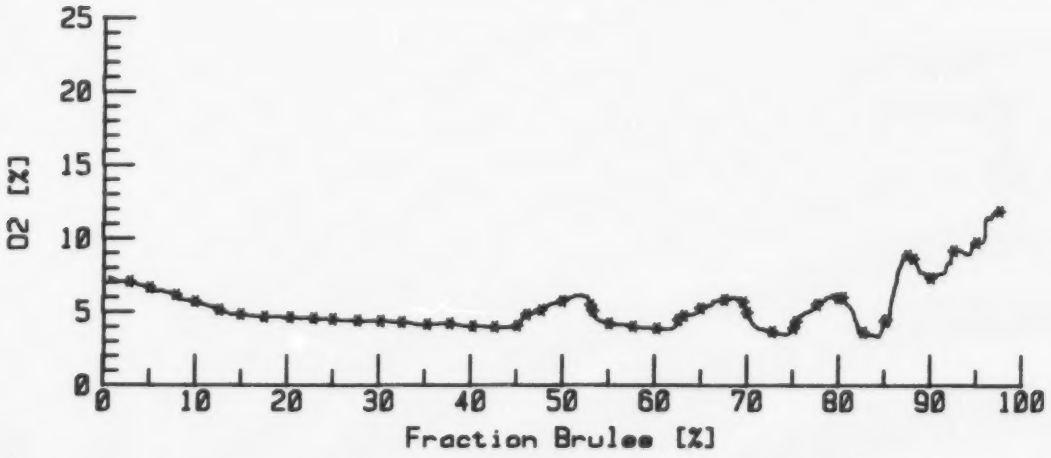
RENDEMENT:46.5 %

MESURES AU PLENUM

| | | |
|---|---|---|
| FRACTION BRULEE | 95.7 % | 90.4 % |
| DUREE | 122 MIN | 101 MIN |
| DELTA T MOYEN | 29 C | 29 C |
| INPUT | 321 MJ | 291 MJ |
| OUTPUT | 145 MJ | 121 MJ |
| PUISSANCE: | 71 MJ/H | 72 MJ/H |
| RENDEMENT | 45 % | 42 % |




Fichier: 120910 Titre: 20 KW-3
Intervalle de lecture [poids %]: 2.5
Nbre de lectures au changement d'etat: 1

# MESURES

FICHIER: 120910
TITRE: 20 KW-3
POIDS INITIAL (BASE HUMIDE)=20.36KG
HUMIDITE DU BOIS=17%
POIDS INTIAL (BASE SECHE)16.90KG
INTERVALLE DE LECTURE [%] 2.5
NBRE. DE LECTURES AU CHANGEMENT D'ETAT 1

| TEMPS MIN. | POIDS KG | T.CH. C | T.AMB C | CO2 % | CO % | O2 % |
|---|---|---|---|---|---|---|
| 1.9 | 19.78 | 157.8 | 23.1 | 12.55 | 3.78 | 7.05 |
| 3.6 | 19.33 | 169.5 | 23.5 | 13.14 | 4.08 | 6.65 |
| 5.6 | 18.74 | 182.8 | 23.5 | 13.59 | 4.08 | 6.16 |
| 6.9 | 18.32 | 191.2 | 23.7 | 14.03 | 4.15 | 5.71 |
| 8.6 | 17.78 | 201.8 | 23.7 | 14.70 | 4.23 | 5.15 |
| 9.9 | 17.31 | 210.5 | 23.8 | 14.58 | 4.67 | 4.83 |
| 11.4 | 16.78 | 220.4 | 24.0 | 14.97 | 4.75 | 4.67 |
| 12.9 | 16.21 | 224.1 | 23.8 | 15.03 | 4.72 | 4.63 |
| 14.4 | 15.69 | 226.2 | 23.5 | 15.16 | 4.86 | 4.57 |
| 15.7 | 15.26 | 226.8 | 23.6 | 14.99 | 4.93 | 4.51 |
| 17.2 | 14.72 | 227.0 | 23.7 | 15.21 | 5.12 | 4.42 |
| 18.7 | 14.20 | 225.6 | 23.4 | 15.14 | 5.02 | 4.37 |
| 20.0 | 13.73 | 225.0 | 23.0 | 15.25 | 5.05 | 4.30 |
| 21.7 | 13.17 | 225.2 | 23.3 | 15.20 | 4.97 | 4.15 |
| 23.2 | 12.67 | 225.3 | 23.5 | 15.06 | 5.03 | 4.22 |
| 24.7 | 12.16 | 223.8 | 23.8 | 15.17 | 5.35 | 4.02 |
| 26.2 | 11.67 | 221.6 | 24.0 | 15.04 | 5.58 | 3.99 |
| 27.7 | 11.18 | 219.6 | 24.0 | 14.75 | 6.74 | 4.05 |
| 28.5 | 10.96 | 216.8 | 24.1 | 14.99 | 5.49 | 4.81 |
| 30.3 | 10.65 | 193.8 | 24.2 | 14.79 | 3.62 | 5.12 |
| 33.5 | 10.18 | 162.4 | 24.3 | 14.44 | 2.42 | 5.73 |
| 38.3 | 9.56 | 134.4 | 24.4 | 14.67 | 2.00 | 5.47 |
| 38.6 | 9.50 | 135.6 | 24.4 | 14.84 | 2.32 | 5.08 |
| 40.3 | 9.14 | 153.2 | 24.5 | 14.72 | 4.14 | 4.22 |
| 42.8 | 8.61 | 173.6 | 24.6 | 15.04 | 4.73 | 4.02 |
| 44.8 | 8.09 | 185.4 | 24.5 | 15.26 | 4.56 | 3.89 |
| 46.9 | 7.61 | 193.5 | 24.5 | 14.59 | 6.11 | 4.48 |
| 47.4 | 7.49 | 192.7 | 24.5 | 14.82 | 5.68 | 4.77 |
| 49.4 | 7.12 | 172.1 | 24.6 | 14.65 | 4.10 | 5.27 |
| 53.6 | 6.60 | 139.3 | 24.7 | 14.15 | 2.79 | 5.85 |
| 57.1 | 6.18 | 124.3 | 24.8 | 14.42 | 1.56 | 5.69 |
| 57.6 | 6.10 | 127.1 | 24.9 | 14.86 | 1.74 | 4.98 |
| 61.3 | 5.54 | 159.7 | 24.8 | 15.60 | 2.26 | 3.68 |
| 64.3 | 5.07 | 177.2 | 24.7 | 14.72 | 4.66 | 3.91 |
| 64.8 | 5.01 | 177.0 | 24.7 | 14.61 | 4.65 | 4.37 |
| 69.1 | 4.54 | 143.8 | 24.8 | 14.47 | 2.10 | 5.52 |
| 75.6 | 4.07 | 114.2 | 24.7 | 14.21 | 1.20 | 5.95 |
| 76.6 | 3.97 | 113.4 | 24.8 | 14.43 | .87 | 6.02 |
| 80.9 | 3.52 | 152.4 | 24.7 | 15.63 | .89 | 3.63 |
| 85.7 | 3.03 | 176.1 | 24.7 | 14.34 | 2.43 | 4.39 |
| 85.9 | 3.00 | 174.3 | 24.7 | 14.42 | 2.23 | 4.49 |
| 95.2 | 2.54 | 116.0 | 24.9 | 10.92 | .92 | 8.90 |
| 99.5 | 2.40 | 103.5 | 25.3 | 11.90 | .42 | 8.65 |
| 106.8 | 2.02 | 151.4 | 25.4 | 12.84 | .19 | 7.35 |
| 115.6 | 1.51 | 174.1 | 25.2 | 11.23 | .11 | 9.21 |
| 126.7 | 1.01 | 168.2 | 25.2 | 10.78 | .09 | 9.76 |
| 141.3 | .50 | 152.4 | 25.0 | 8.74 | .25 | 11.89 |

RESULTATS (AVEC HC<0 CONSERVE)

TITRE: 20 KW-3
FICHIER: 120910

| TEMPS MIN. | P.INI KG | P.FIN KG | INPUT MJ | OUTPUT MJ | CO gr | HC gr |
|---|---|---|---|---|---|---|
| 1.9 | 16.90 | 16.39 | 6.33 | .45 | 66 | 40 |
| 3.6 | 16.39 | 16.06 | 4.30 | .31 | 111 | 71 |
| 5.6 | 16.06 | 15.73 | 4.38 | .46 | 155 | 104 |
| 6.9 | 15.73 | 15.40 | 4.38 | .52 | 199 | 139 |
| 8.6 | 15.40 | 15.05 | 4.82 | .62 | 246 | 179 |
| 9.9 | 15.05 | 14.69 | 4.93 | .71 | 298 | 220 |
| 11.4 | 14.69 | 14.30 | 5.61 | .79 | 355 | 269 |
| 12.9 | 14.30 | 13.90 | 5.81 | .91 | 414 | 320 |
| 14.4 | 13.90 | 13.55 | 5.20 | .83 | 467 | 367 |
| 15.7 | 13.55 | 13.18 | 5.50 | .99 | 525 | 415 |
| 17.2 | 13.18 | 12.77 | 6.18 | 1.13 | 590 | 471 |
| 18.7 | 12.77 | 12.38 | 5.90 | 1.23 | 652 | 522 |
| 20.0 | 12.38 | 11.97 | 6.37 | 1.41 | 719 | 577 |
| 21.7 | 11.97 | 11.55 | 6.69 | 1.72 | 789 | 631 |
| 23.2 | 11.55 | 11.14 | 6.55 | 1.80 | 860 | 682 |
| 24.7 | 11.14 | 10.73 | 6.66 | 1.92 | 934 | 733 |
| 26.2 | 10.73 | 10.32 | 6.67 | 2.05 | 1012 | 782 |
| 27.7 | 10.32 | 10.03 | 4.93 | 1.42 | 1078 | 819 |
| 28.5 | 10.03 | 9.80 | 3.77 | 1.12 | 1120 | 849 |
| 30.3 | 9.80 | 9.47 | 5.64 | 2.25 | 1169 | 885 |
| 33.5 | 9.47 | 9.00 | 7.97 | 3.85 | 1221 | 928 |
| 38.3 | 9.00 | 8.71 | 5.12 | 2.85 | 1250 | 951 |
| 38.6 | 8.71 | 8.53 | 3.20 | 1.78 | 1270 | 965 |
| 40.3 | 8.53 | 8.15 | 6.89 | 3.60 | 1341 | 994 |
| 42.8 | 8.15 | 7.69 | 8.36 | 4.18 | 1435 | 1032 |
| 44.8 | 7.69 | 7.25 | 8.22 | 4.31 | 1524 | 1067 |
| 46.9 | 7.25 | 6.98 | 5.08 | 2.34 | 1592 | 1093 |
| 47.4 | 6.98 | 6.76 | 4.20 | 1.91 | 1645 | 1116 |
| 49.4 | 6.76 | 6.36 | 7.84 | 4.17 | 1725 | 1152 |
| 53.6 | 6.36 | 5.94 | 8.52 | 5.40 | 1794 | 1178 |
| 57.1 | 5.94 | 5.72 | 4.69 | 3.51 | 1818 | 1186 |
| 57.6 | 5.72 | 5.43 | 6.08 | 4.65 | 1852 | 1193 |
| 61.3 | 5.43 | 4.96 | 10.12 | 7.97 | 1922 | 1197 |
| 64.3 | 4.96 | 4.71 | 5.44 | 3.61 | 1991 | 1207 |
| 64.8 | 4.71 | 4.47 | 5.42 | 3.44 | 2059 | 1221 |
| 69.1 | 4.47 | 4.04 | 10.07 | 7.60 | 2128 | 1235 |
| 75.6 | 4.04 | 3.78 | 6.33 | 5.34 | 2156 | 1238 |
| 76.6 | 3.78 | 3.52 | 6.18 | 5.22 | 2176 | 1242 |
| 80.9 | 3.52 | 3.09 | 11.03 | 10.99 | 2213 | 1213 |
| 85.7 | 3.09 | 2.85 | 6.31 | 5.56 | 2269 | 1204 |
| 85.9 | 2.85 | 2.62 | 6.10 | 5.37 | 2319 | 1196 |
| 95.2 | 2.62 | 2.33 | 7.75 | 7.35 | 2357 | 1183 |
| 99.5 | 2.33 | 2.09 | 6.82 | 6.18 | 2371 | 1183 |
| 106.8 | 2.09 | 1.67 | 12.07 | 11.82 | 2382 | 1162 |
| 115.6 | 1.67 | 1.20 | 14.49 | 13.58 | 2391 | 1145 |
| 126.7 | 1.20 | .72 | 15.42 | 14.23 | 2399 | 1134 |
| 141.3 | .72 | 0.00 | 24.13 | 20.95 | 2442 | 1137 |

RESULTATS (AVEC HC<0 CONSERVE)

FICHIER: 120910 20 KW-3
NOMBRE DE POINTS DE MESURE= 47

MESURES DE CHEMINEE (100% CHARGE BRULEE)

POIDS SEC= 16.9 KG
DUREE =175 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
2442 grammes
12.6 g/MJ
837 g/Hre

HYDROCARBURES :
1137 grammes
5.8 g/MJ
390 g/Hre

INPUT : 334 MJ

OUTPUT : 194 MJ

PUISSANCE: 67 MJ/Hre

RENDEMENT:58.1 %

MESURES DE CHEMINEE (90.1% CHARGE BRULEE)

POIDS SEC= 15.2 KG
DUREE =111 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
2382 grammes
16.4 g/MJ
1286 g/Hre

HYDROCARBURES :
1162 grammes
8.0 g/MJ
627 g/Hre

INPUT : 280 MJ

OUTPUT : 146 MJ

PUISSANCE: 79 MJ/Hre

RENDEMENT:51.9 %

MESURES AU PLENUM

| | | |
|---|---|---|
| FRACTION BRULEE | 95.8 % | 90.1 % |
| DUREE | 134 MIN | 111 MIN |
| DELTA T MOYEN | 29 C | 29 C |
| INPUT | 310 MJ | 280 MJ |
| OUTPUT | 160 MJ | 132 MJ |
| PUISSANCE: | 72 MJ/H | 71 MJ/H |
| RENDEMENT | 52 % | 47 % |

RESULTATS (AVEC HC<0 ELIMINE)

TITRE: 20 KW-3
FICHIER: 120910

| TEMPS MIN. | P.INI KG | P.FIN KG | INPUT MJ | OUTPUT MJ | CO gr | HC gr |
|---|---|---|---|---|---|---|
| 1.9 | 16.90 | 16.39 | 6.33 | .45 | 66 | 40 |
| 3.6 | 16.39 | 16.06 | 4.30 | .31 | 111 | 71 |
| 5.6 | 16.06 | 15.73 | 4.38 | .46 | 155 | 104 |
| 6.9 | 15.73 | 15.40 | 4.38 | .52 | 199 | 139 |
| 8.6 | 15.40 | 15.05 | 4.82 | .62 | 246 | 179 |
| 9.9 | 15.05 | 14.69 | 4.93 | .71 | 298 | 220 |
| 11.4 | 14.69 | 14.30 | 5.61 | .79 | 355 | 269 |
| 12.9 | 14.30 | 13.90 | 5.81 | .91 | 414 | 320 |
| 14.4 | 13.90 | 13.55 | 5.20 | .83 | 467 | 367 |
| 15.7 | 13.55 | 13.18 | 5.50 | .99 | 525 | 415 |
| 17.2 | 13.18 | 12.77 | 6.18 | 1.13 | 590 | 471 |
| 18.7 | 12.77 | 12.38 | 5.90 | 1.23 | 652 | 522 |
| 20.0 | 12.38 | 11.97 | 6.37 | 1.41 | 719 | 577 |
| 21.7 | 11.97 | 11.55 | 6.69 | 1.72 | 789 | 631 |
| 23.2 | 11.55 | 11.14 | 6.55 | 1.80 | 860 | 682 |
| 24.7 | 11.14 | 10.73 | 6.66 | 1.92 | 934 | 733 |
| 26.2 | 10.73 | 10.32 | 6.67 | 2.05 | 1012 | 782 |
| 27.7 | 10.32 | 10.03 | 4.93 | 1.42 | 1078 | 819 |
| 28.5 | 10.03 | 9.80 | 3.77 | 1.12 | 1120 | 849 |
| 30.3 | 9.80 | 9.47 | 5.64 | 2.25 | 1169 | 885 |
| 33.5 | 9.47 | 9.00 | 7.97 | 3.85 | 1221 | 928 |
| 38.3 | 9.00 | 8.71 | 5.12 | 2.85 | 1250 | 951 |
| 38.6 | 8.71 | 8.53 | 3.20 | 1.78 | 1270 | 965 |
| 40.3 | 8.53 | 8.15 | 6.89 | 3.60 | 1341 | 994 |
| 42.8 | 8.15 | 7.69 | 8.36 | 4.18 | 1435 | 1032 |
| 44.8 | 7.69 | 7.25 | 8.22 | 4.31 | 1524 | 1067 |
| 46.9 | 7.25 | 6.98 | 5.08 | 2.34 | 1592 | 1093 |
| 47.4 | 6.98 | 6.76 | 4.20 | 1.91 | 1645 | 1116 |
| 49.4 | 6.76 | 6.36 | 7.84 | 4.17 | 1725 | 1152 |
| 53.6 | 6.36 | 5.94 | 8.52 | 5.40 | 1794 | 1178 |
| 57.1 | 5.94 | 5.72 | 4.69 | 3.51 | 1818 | 1186 |
| 57.6 | 5.72 | 5.43 | 6.08 | 4.65 | 1852 | 1193 |
| 61.3 | 5.43 | 4.96 | 10.12 | 7.97 | 1922 | 1197 |
| 64.3 | 4.96 | 4.71 | 5.44 | 3.61 | 1991 | 1207 |
| 64.8 | 4.71 | 4.47 | 5.42 | 3.44 | 2059 | 1221 |
| 69.1 | 4.47 | 4.04 | 10.07 | 7.60 | 2128 | 1235 |
| 75.6 | 4.04 | 3.78 | 6.33 | 5.34 | 2156 | 1238 |
| 76.6 | 3.78 | 3.52 | 6.18 | 5.22 | 2176 | 1242 |
| 80.9 | 3.52 | 3.09 | 11.03 | 9.35 | 2213 | 1242 |
| 85.7 | 3.09 | 2.85 | 6.31 | 5.03 | 2269 | 1242 |
| 85.9 | 2.85 | 2.62 | 6.10 | 4.92 | 2319 | 1242 |
| 95.2 | 2.62 | 2.33 | 7.75 | 6.62 | 2357 | 1242 |
| 99.5 | 2.33 | 2.09 | 6.82 | 6.18 | 2371 | 1242 |
| 106.8 | 2.09 | 1.67 | 12.07 | 10.67 | 2382 | 1242 |
| 115.6 | 1.67 | 1.20 | 14.49 | 12.64 | 2391 | 1242 |
| 126.7 | 1.20 | .72 | 15.42 | 13.61 | 2399 | 1242 |
| 141.3 | .72 | 0.00 | 24.13 | 20.95 | 2442 | 1245 |

RESULTATS (AVEC HC<0 ELIMINE)

FICHIER: 120910 20 KW-3
NOMBRE DE POINTS DE MESURE= 47

MESURES DE CHEMINEE (100% CHARGE BRULEE)

POIDS SEC= 16.9 KG
DUREE =175 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
2442 grammes
13.0 g/MJ
837 g/Hre
HYDROCARBURES :
1245 grammes
6.6 g/MJ
427 g/Hre

INPUT : 334 MJ

OUTPUT : 188 MJ

PUISSANCE: 65 MJ/Hre

RENDEMENT:56.3 %

MESURES DE CHEMINEE (90.1% CHARGE BRULEE)

POIDS SEC= 15.2 KG
DUREE =111 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
2382 grammes
16.9 g/MJ
1286 g/Hre
HYDROCARBURES :
1242 grammes
8.8 g/MJ
671 g/Hre

INPUT : 280 MJ

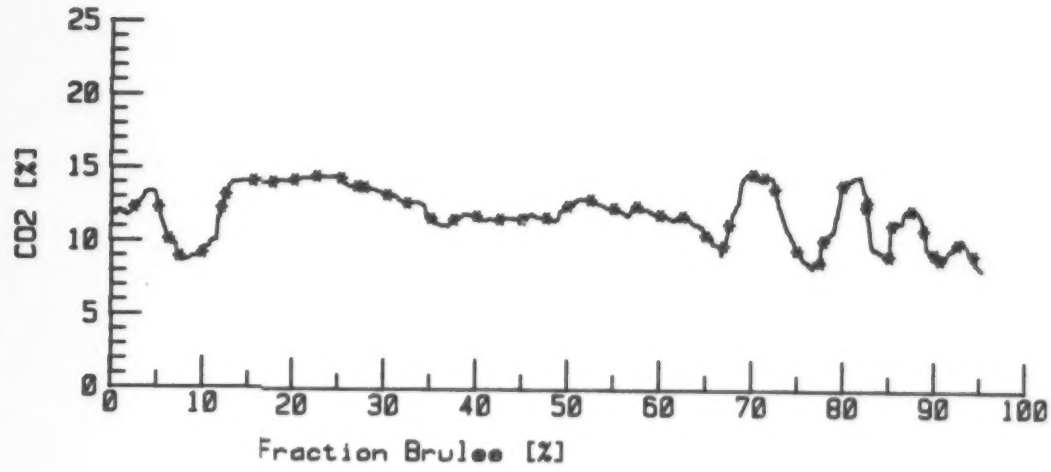
OUTPUT : 141 MJ

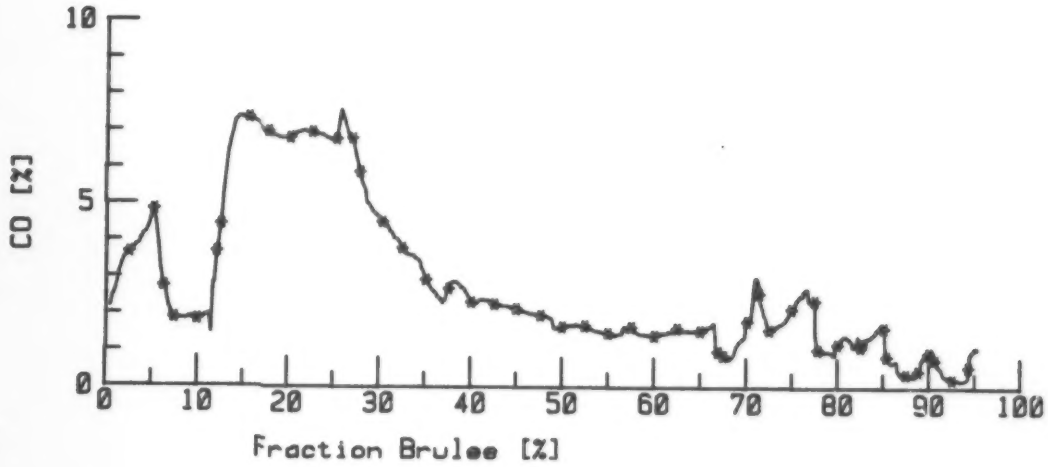
PUISSANCE: 76 MJ/Hre

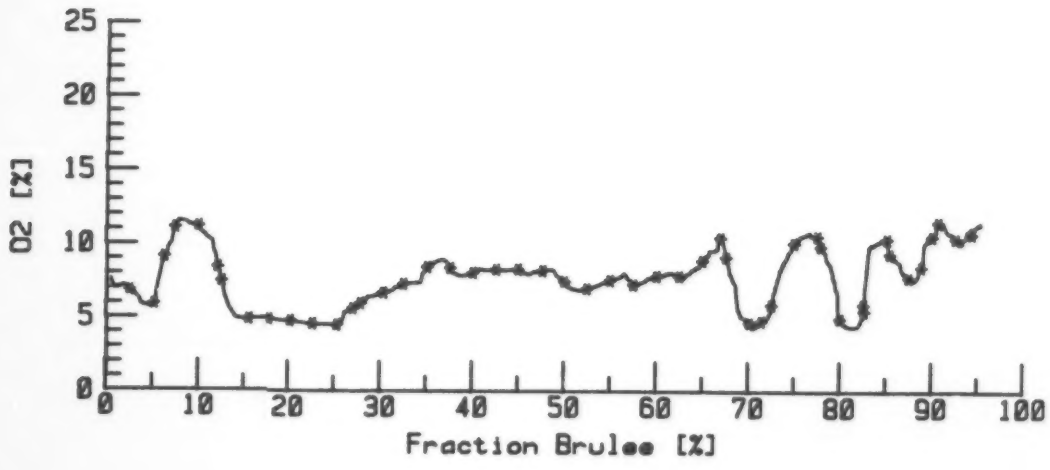
RENDEMENT:50.4 %

MESURES AU PLENUM

| | | |
|---|---|---|
| FRACTION BRULEE | 95.8 % | 90.1 % |
| DUREE | 134 MIN | 111 MIN |
| DELTA T MOYEN | 29 C | 29 C |
| INPUT | 310 MJ | 280 MJ |
| OUTPUT | 160 MJ | 132 MJ |
| PUISSANCE: | 72 MJ/H | 71 MJ/H |
| RENDEMENT | 52 % | 47 % |




Fichier: 120914 Titre: 13 KW-1
Intervalle de lecture [poids %]: 2.5
Nbre de lectures au changement d'etat: 1

# MESURES

FICHIER: 120914
TITRE: 13 KW-1
POIDS INITIAL (BASE HUMIDE)=20.76KG
HUMIDITE DU BOIS=16%
POIDS INTIAL (BASE SECHE)17.44KG
INTERVALLE DE LECTURE [%] 2.5
NBRE. DE LECTURES AU CHANGEMENT D'ETAT 1

| TEMPS MIN. | POIDS KG | T.CH. C | T.AMB C | CO2 % | CO % | O2 % |
|---|---|---|---|---|---|---|
| 2.6 | 20.23 | 179.4 | 24.6 | 12.29 | 3.67 | 6.82 |
| 4.6 | 19.68 | 194.4 | 24.4 | 12.28 | 4.84 | 5.88 |
| 5.6 | 19.45 | 197.5 | 24.5 | 10.11 | 2.74 | 9.11 |
| 7.7 | 19.20 | 170.1 | 24.5 | 8.94 | 1.87 | 11.09 |
| 14.2 | 18.68 | 112.3 | 24.3 | 9.19 | 1.84 | 11.18 |
| 18.7 | 18.24 | 99.0 | 24.5 | 12.27 | 3.69 | 8.39 |
| 18.9 | 18.15 | 101.5 | 24.6 | 13.18 | 4.44 | 7.44 |
| 20.5 | 17.53 | 129.2 | 24.6 | 14.10 | 7.35 | 4.86 |
| 21.7 | 17.04 | 147.9 | 24.6 | 14.15 | 6.99 | 4.92 |
| 22.7 | 16.55 | 159.9 | 24.7 | 14.32 | 6.83 | 4.80 |
| 23.7 | 16.05 | 169.3 | 24.7 | 14.58 | 6.98 | 4.60 |
| 25.0 | 15.50 | 174.8 | 24.7 | 14.45 | 6.78 | 4.52 |
| 26.0 | 15.14 | 175.4 | 24.7 | 13.92 | 6.80 | 5.62 |
| 26.5 | 14.97 | 170.9 | 24.7 | 13.85 | 5.88 | 5.99 |
| 28.8 | 14.45 | 153.2 | 24.7 | 13.31 | 4.52 | 6.72 |
| 31.3 | 14.00 | 138.6 | 24.8 | 12.77 | 3.80 | 7.30 |
| 34.8 | 13.47 | 124.1 | 24.8 | 11.73 | 2.93 | 8.46 |
| 38.8 | 12.95 | 110.1 | 24.4 | 11.63 | 2.69 | 8.39 |
| 43.6 | 12.44 | 103.5 | 24.5 | 11.87 | 2.33 | 8.08 |
| 49.4 | 11.91 | 97.9 | 24.7 | 11.68 | 2.27 | 8.31 |
| 55.2 | 11.42 | 95.6 | 24.8 | 11.67 | 2.14 | 8.32 |
| 62.1 | 10.86 | 94.7 | 24.3 | 11.79 | 1.97 | 8.23 |
| 68.1 | 10.37 | 95.2 | 24.5 | 12.62 | 1.65 | 7.50 |
| 74.6 | 9.86 | 101.0 | 24.5 | 13.07 | 1.69 | 7.01 |
| 80.7 | 9.33 | 102.7 | 24.2 | 12.50 | 1.49 | 7.58 |
| 88.7 | 8.81 | 101.3 | 24.8 | 12.63 | 1.65 | 7.31 |
| 97.5 | 8.29 | 100.2 | 24.8 | 12.05 | 1.42 | 7.88 |
| 105.8 | 7.78 | 99.8 | 25.1 | 11.96 | 1.61 | 7.88 |
| 115.5 | 7.26 | 98.5 | 25.1 | 10.65 | 1.55 | 8.93 |
| 123.5 | 6.86 | 95.8 | 25.1 | 9.93 | .99 | 10.49 |
| 124.2 | 6.73 | 101.7 | 25.2 | 11.41 | .87 | 9.16 |
| 128.7 | 6.20 | 145.9 | 25.1 | 14.84 | 1.81 | 4.69 |
| 130.5 | 5.93 | 157.3 | 25.1 | 14.65 | 2.58 | 4.81 |
| 133.0 | 5.70 | 146.4 | 25.0 | 13.87 | 1.58 | 5.92 |
| 141.3 | 5.19 | 110.4 | 25.0 | 9.61 | 2.15 | 10.12 |
| 154.4 | 4.67 | 80.5 | 24.9 | 8.81 | 2.38 | 10.58 |
| 155.9 | 4.59 | 80.7 | 25.0 | 10.32 | 1.04 | 9.90 |
| 161.1 | 4.14 | 127.6 | 25.0 | 14.11 | 1.19 | 4.99 |
| 166.2 | 3.60 | 167.3 | 25.1 | 12.96 | 1.21 | 5.51 |
| 166.4 | 3.62 | 165.8 | 25.1 | 12.62 | 1.12 | 5.96 |
| 188.4 | 3.09 | 78.0 | 25.4 | 9.24 | 1.64 | 10.41 |
| 189.7 | 3.03 | 78.8 | 25.4 | 11.37 | .86 | 9.40 |
| 197.3 | 2.59 | 134.7 | 25.3 | 12.38 | .38 | 7.78 |
| 202.3 | 2.31 | 166.5 | 25.4 | 11.03 | .47 | 8.51 |
| 215.1 | 2.07 | 91.4 | 25.4 | 9.39 | .95 | 10.59 |
| 222.0 | 1.93 | 79.4 | 25.4 | 9.01 | .77 | 11.57 |
| 233.5 | 1.53 | 130.9 | 25.5 | 10.08 | .25 | 10.44 |
| 242.2 | 1.17 | 148.6 | 25.5 | 9.30 | .57 | 10.75 |

RESULTATS (AVEC HC<0 CONSERVE)

TITRE: 13 KW-1
FICHIER: 120914

| TEMPS MIN. | P.INI KG | P.FIN KG | INPUT MJ | OUTPUT MJ | CO gr | HC gr |
|---|---|---|---|---|---|---|
| 2.6 | 17.44 | 16.92 | 6.55 | .91 | 71 | 34 |
| 4.6 | 16.92 | 16.66 | 3.32 | .53 | 116 | 51 |
| 5.6 | 16.66 | 16.50 | 2.08 | .42 | 137 | 61 |
| 7.7 | 16.50 | 16.23 | 3.45 | .70 | 165 | 82 |
| 14.2 | 16.23 | 15.90 | 4.48 | .98 | 199 | 114 |
| 18.7 | 15.90 | 15.71 | 2.56 | .32 | 223 | 138 |
| 18.9 | 15.71 | 15.46 | 3.51 | .37 | 259 | 172 |
| 20.5 | 15.46 | 15.06 | 5.64 | .54 | 338 | 227 |
| 21.7 | 15.06 | 14.70 | 5.17 | .56 | 408 | 276 |
| 22.7 | 14.70 | 14.32 | 5.40 | .65 | 480 | 328 |
| 23.7 | 14.32 | 13.92 | 5.92 | .73 | 558 | 386 |
| 25.0 | 13.92 | 13.57 | 5.28 | .80 | 628 | 436 |
| 26.0 | 13.57 | 13.36 | 3.11 | .39 | 669 | 468 |
| 26.5 | 13.36 | 13.09 | 4.10 | .61 | 718 | 508 |
| 28.8 | 13.09 | 12.71 | 5.90 | 1.24 | 779 | 563 |
| 31.3 | 12.71 | 12.31 | 6.17 | 1.58 | 838 | 617 |
| 34.8 | 12.31 | 11.89 | 6.76 | 2.09 | 896 | 671 |
| 38.8 | 11.89 | 11.46 | 6.78 | 2.47 | 952 | 720 |
| 43.6 | 11.46 | 11.03 | 7.01 | 2.99 | 1004 | 764 |
| 49.4 | 11.03 | 10.60 | 7.03 | 3.16 | 1056 | 806 |
| 55.2 | 10.60 | 10.16 | 7.38 | 3.55 | 1109 | 848 |
| 62.1 | 10.16 | 9.71 | 7.59 | 3.94 | 1159 | 886 |
| 68.1 | 9.71 | 9.28 | 7.45 | 4.21 | 1200 | 919 |
| 74.6 | 9.28 | 8.83 | 7.89 | 4.66 | 1243 | 951 |
| 80.7 | 8.83 | 8.37 | 8.21 | 5.17 | 1285 | 978 |
| 88.7 | 8.37 | 7.91 | 8.45 | 5.55 | 1334 | 1003 |
| 97.5 | 7.91 | 7.45 | 8.60 | 6.05 | 1380 | 1021 |
| 105.8 | 7.45 | 6.99 | 8.80 | 6.31 | 1434 | 1037 |
| 115.5 | 6.99 | 6.58 | 8.14 | 6.35 | 1489 | 1040 |
| 123.5 | 6.58 | 6.34 | 4.77 | 3.51 | 1512 | 1049 |
| 124.2 | 6.34 | 6.04 | 6.08 | 4.51 | 1534 | 1061 |
| 128.7 | 6.04 | 5.67 | 7.65 | 6.03 | 1579 | 1065 |
| 130.5 | 5.67 | 5.45 | 4.83 | 3.53 | 1617 | 1072 |
| 133.0 | 5.45 | 5.11 | 7.32 | 5.81 | 1658 | 1076 |
| 141.3 | 5.11 | 4.63 | 10.61 | 7.79 | 1763 | 1088 |
| 154.4 | 4.63 | 4.36 | 6.41 | 4.98 | 1840 | 1090 |
| 155.9 | 4.36 | 4.12 | 5.67 | 4.79 | 1869 | 1091 |
| 161.1 | 4.12 | 3.65 | 11.15 | 11.00 | 1923 | 1061 |
| 166.2 | 3.65 | 3.41 | 6.20 | 6.77 | 1959 | 1027 |
| 166.4 | 3.41 | 3.17 | 6.00 | 6.55 | 1992 | 994 |
| 188.4 | 3.17 | 2.90 | 7.23 | 6.34 | 2057 | 989 |
| 189.7 | 2.90 | 2.66 | 6.22 | 5.07 | 2082 | 999 |
| 197.3 | 2.66 | 2.33 | 9.34 | 8.98 | 2099 | 985 |
| 202.3 | 2.33 | 2.08 | 7.03 | 7.48 | 2118 | 955 |
| 215.1 | 2.08 | 1.90 | 5.18 | 4.81 | 2148 | 949 |
| 222.0 | 1.90 | 1.65 | 7.36 | 6.21 | 2183 | 956 |
| 233.5 | 1.65 | 1.29 | 11.05 | 10.19 | 2199 | 950 |
| 242.2 | 1.29 | 0.00 | 40.62 | 38.50 | 2353 | 874 |

RESULTATS (AVEC HC<0 CONSERVE)

FICHIER: 120914 13 KW-1
NOMBRE DE POINTS DE MESURE= 48

MESURES DE CHEMINEE (100% CHARGE BRULEE)

POIDS SEC= 17.4 KG
DUREE =290 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
2353 grammes
10.7 g/MJ
487 g/Hre

HYDROCARBURES :
874 grammes
4.0 g/MJ
181 g/Hre

INPUT : 343 MJ

OUTPUT : 221 MJ

PUISSANCE: 46 MJ/Hre

RENDEMENT:64.3 %

MESURES DE CHEMINEE (90.6% CHARGE BRULEE)

POIDS SEC= 15.8 KG
DUREE =228 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
2183 grammes
12.7 g/MJ
575 g/Hre

HYDROCARBURES :
956 grammes
5.6 g/MJ
252 g/Hre

INPUT : 292 MJ

OUTPUT : 172 MJ

PUISSANCE: 45 MJ/Hre

RENDEMENT:58.9 %

MESURES AU PLENUM

| | | |
|---|---|---|
| FRACTION BRULEE | 92.6 % | 90.6 % |
| DUREE | 238 MIN | 228 MIN |
| DELTA T MOYEN | 19 C | 19 C |
| INPUT | 303 MJ | 292 MJ |
| OUTPUT | 186 MJ | 178 MJ |
| PUISSANCE: | 47 MJ/H | 47 MJ/H |
| RENDEMENT | 61 % | 61 % |

RESULTATS (AVEC HC<0 ELIMINE)

TITRE: 13 KW-1
FICHIER: 120914

| TEMPS MIN. | P.INI KG | P.FIN KG | INPUT MJ | OUTPUT MJ | CO gr | HC gr |
|---|---|---|---|---|---|---|
| 2.6 | 17.44 | 16.92 | 6.55 | .91 | 71 | 34 |
| 4.6 | 16.92 | 16.66 | 3.32 | .53 | 116 | 51 |
| 5.6 | 16.66 | 16.50 | 2.08 | .42 | 137 | 61 |
| 7.7 | 16.50 | 16.23 | 3.45 | .70 | 165 | 82 |
| 14.2 | 16.23 | 15.90 | 4.48 | .98 | 199 | 114 |
| 18.7 | 15.90 | 15.71 | 2.56 | .32 | 223 | 138 |
| 18.9 | 15.71 | 15.46 | 3.51 | .37 | 259 | 172 |
| 20.5 | 15.46 | 15.06 | 5.64 | .54 | 338 | 227 |
| 21.7 | 15.06 | 14.70 | 5.17 | .56 | 408 | 276 |
| 22.7 | 14.70 | 14.32 | 5.40 | .65 | 480 | 328 |
| 23.7 | 14.32 | 13.92 | 5.92 | .73 | 558 | 386 |
| 25.0 | 13.92 | 13.57 | 5.28 | .80 | 628 | 436 |
| 26.0 | 13.57 | 13.36 | 3.11 | .39 | 669 | 468 |
| 26.5 | 13.36 | 13.09 | 4.10 | .61 | 718 | 508 |
| 28.8 | 13.09 | 12.71 | 5.90 | 1.24 | 779 | 563 |
| 31.3 | 12.71 | 12.31 | 6.17 | 1.58 | 838 | 617 |
| 34.8 | 12.31 | 11.89 | 6.76 | 2.09 | 896 | 671 |
| 38.8 | 11.89 | 11.46 | 6.78 | 2.47 | 952 | 720 |
| 43.6 | 11.46 | 11.03 | 7.01 | 2.99 | 1004 | 764 |
| 49.4 | 11.03 | 10.60 | 7.03 | 3.16 | 1056 | 806 |
| 55.2 | 10.60 | 10.16 | 7.38 | 3.55 | 1109 | 848 |
| 62.1 | 10.16 | 9.71 | 7.59 | 3.94 | 1159 | 886 |
| 68.1 | 9.71 | 9.28 | 7.45 | 4.21 | 1200 | 919 |
| 74.6 | 9.28 | 8.83 | 7.89 | 4.66 | 1243 | 951 |
| 80.7 | 8.83 | 8.37 | 8.21 | 5.17 | 1285 | 978 |
| 88.7 | 8.37 | 7.91 | 8.45 | 5.55 | 1334 | 1003 |
| 97.5 | 7.91 | 7.45 | 8.60 | 6.05 | 1380 | 1021 |
| 105.8 | 7.45 | 6.99 | 8.80 | 6.31 | 1434 | 1037 |
| 115.5 | 6.99 | 6.58 | 8.14 | 6.35 | 1489 | 1040 |
| 123.5 | 6.58 | 6.34 | 4.77 | 3.51 | 1512 | 1049 |
| 124.2 | 6.34 | 6.04 | 6.08 | 4.51 | 1534 | 1061 |
| 128.7 | 6.04 | 5.67 | 7.65 | 6.03 | 1579 | 1065 |
| 130.5 | 5.67 | 5.45 | 4.83 | 3.53 | 1617 | 1072 |
| 133.0 | 5.45 | 5.11 | 7.32 | 5.81 | 1658 | 1076 |
| 141.3 | 5.11 | 4.63 | 10.61 | 7.79 | 1763 | 1088 |
| 154.4 | 4.63 | 4.36 | 6.41 | 4.98 | 1840 | 1090 |
| 155.9 | 4.36 | 4.12 | 5.67 | 4.79 | 1869 | 1091 |
| 161.1 | 4.12 | 3.65 | 11.15 | 9.31 | 1923 | 1091 |
| 166.2 | 3.65 | 3.41 | 6.20 | 4.86 | 1959 | 1091 |
| 166.4 | 3.41 | 3.17 | 6.00 | 4.71 | 1992 | 1091 |
| 188.4 | 3.17 | 2.90 | 7.23 | 6.03 | 2057 | 1091 |
| 189.7 | 2.90 | 2.66 | 6.22 | 5.07 | 2082 | 1101 |
| 197.3 | 2.66 | 2.33 | 9.34 | 8.22 | 2099 | 1101 |
| 202.3 | 2.33 | 2.08 | 7.03 | 5.79 | 2118 | 1101 |
| 215.1 | 2.08 | 1.90 | 5.18 | 4.47 | 2148 | 1101 |
| 222.0 | 1.90 | 1.65 | 7.36 | 6.21 | 2183 | 1109 |
| 233.5 | 1.65 | 1.29 | 11.05 | 9.84 | 2199 | 1109 |
| 242.2 | 1.29 | 0.00 | 40.62 | 34.27 | 2353 | 1109 |

RESULTATS (AVEC HC<0 ELIMINE)

FICHIER: 120914 13 KW-1
NOMBRE DE POINTS DE MESURE= 48

MESURES DE CHEMINEE (100% CHARGE BRULEE)

POIDS SEC= 17.4 KG
DUREE =290 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
2353 grammes
11.3 g/MJ
487 g/Hre
HYDROCARBURES :
1109 grammes
5.3 g/MJ
229 g/Hre

INPUT : 343 MJ

OUTPUT : 208 MJ

PUISSANCE: 43 MJ/Hre

RENDEMENT:60.4 %

MESURES DE CHEMINEE (90.6% CHARGE BRULEE)

POIDS SEC= 15.8 KG
DUREE =228 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
2183 grammes
13.4 g/MJ
575 g/Hre
HYDROCARBURES :
1109 grammes
6.8 g/MJ
292 g/Hre

INPUT : 292 MJ

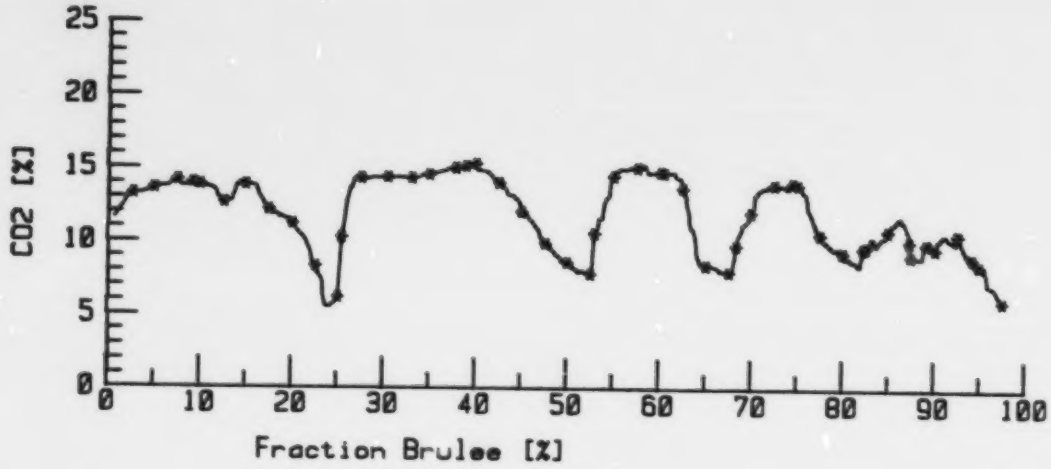
OUTPUT : 163 MJ

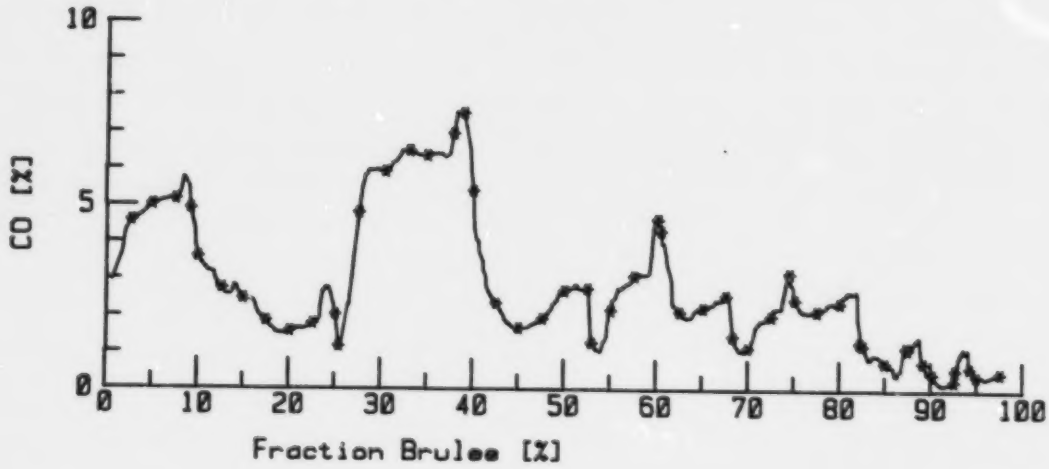
PUISSANCE: 43 MJ/Hre

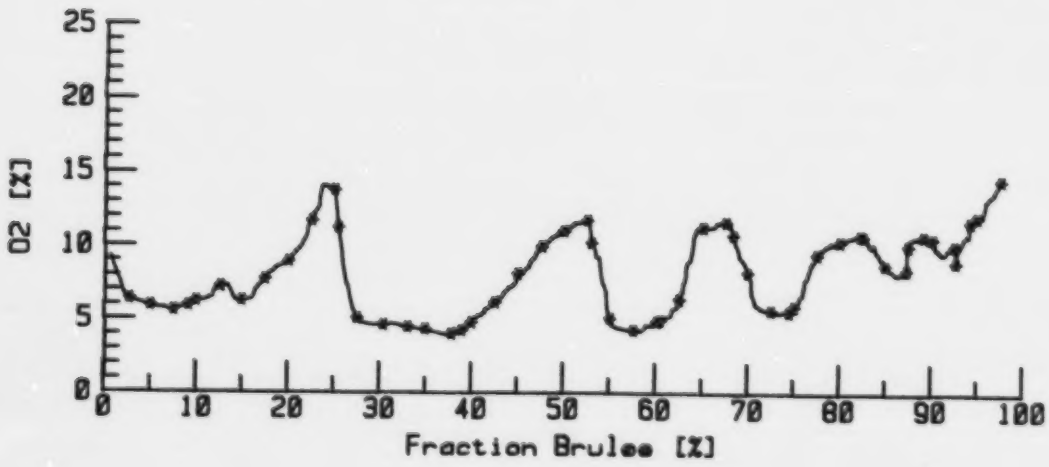
RENDEMENT:56.0 %

MESURES AU PLENUM

| | | |
|---|---|---|
| FRACTION BRULEE | 92.6 % | 90.6 % |
| DUREE | 238 MIN | 228 MIN |
| DELTA T MOYEN | 19 C | 19 C |
| INPUT | 303 MJ | 292 MJ |
| OUTPUT | 186 MJ | 178 MJ |
| PUISSANCE: | 47 MJ/H | 47 MJ/H |
| RENDEMENT | 61 % | 61 % |




Fichier: 160912 Titre: 13KW-2
Intervalle de lecture [poids %]: 2.5
Nbre de lectures au changement d'etat: 1

# MESURES

FICHIER: 160912
TITRE: 13KW-2
POIDS INITIAL (BASE HUMIDE)=20.35KG
HUMIDITE DU BOIS=15%
POIDS INTIAL (BASE SECHE)17.30KG
INTERVALLE DE LECTURE [%] 2.5
NBRE. DE LECTURES AU CHANGEMENT D'ETAT 1

| TEMPS MIN. | POIDS KG | T.CH. C | T.AMB C | CO2 % | CO % | O2 % |
|---|---|---|---|---|---|---|
| 1.6 | 19.79 | 143.3 | 25.2 | 13.23 | 4.57 | 6.35 |
| 3.1 | 19.32 | 155.6 | 24.9 | 13.60 | 5.02 | 5.90 |
| 4.6 | 18.81 | 167.4 | 25.0 | 14.17 | 5.16 | 5.59 |
| 5.7 | 18.48 | 171.2 | 25.1 | 13.98 | 4.92 | 5.91 |
| 6.4 | 18.31 | 165.5 | 25.0 | 13.86 | 3.60 | 6.22 |
| 9.7 | 17.77 | 145.4 | 25.0 | 12.66 | 2.75 | 7.23 |
| 13.2 | 17.30 | 131.9 | 25.2 | 13.85 | 2.47 | 6.27 |
| 17.2 | 16.78 | 123.8 | 25.1 | 12.18 | 1.86 | 7.73 |
| 23.2 | 16.26 | 113.0 | 25.2 | 11.23 | 1.58 | 8.94 |
| 29.8 | 15.75 | 101.2 | 25.2 | 8.33 | 1.79 | 11.70 |
| 39.3 | 15.25 | 78.2 | 25.3 | 6.18 | 2.04 | 13.77 |
| 40.1 | 15.17 | 78.4 | 25.3 | 10.29 | 1.17 | 11.24 |
| 42.1 | 14.73 | 104.1 | 25.2 | 14.37 | 4.81 | 5.06 |
| 43.8 | 14.15 | 130.2 | 25.2 | 14.43 | 5.93 | 4.63 |
| 45.4 | 13.61 | 147.7 | 25.2 | 14.38 | 6.49 | 4.50 |
| 46.4 | 13.23 | 157.1 | 25.4 | 14.62 | 6.37 | 4.36 |
| 48.1 | 12.64 | 170.0 | 25.2 | 15.07 | 6.97 | 4.02 |
| 48.9 | 12.42 | 171.7 | 25.3 | 15.20 | 7.53 | 4.24 |
| 49.9 | 12.20 | 165.8 | 25.3 | 15.36 | 5.41 | 4.78 |
| 53.4 | 11.68 | 146.3 | 25.2 | 14.06 | 2.35 | 6.15 |
| 58.9 | 11.18 | 124.5 | 25.3 | 12.10 | 1.67 | 8.10 |
| 66.3 | 10.65 | 104.8 | 25.4 | 9.93 | 1.93 | 9.97 |
| 75.4 | 10.17 | 89.4 | 25.3 | 8.64 | 2.69 | 11.02 |
| 85.9 | 9.65 | 79.8 | 24.7 | 7.87 | 2.75 | 11.75 |
| 87.4 | 9.56 | 80.7 | 24.8 | 10.64 | 1.28 | 10.23 |
| 89.9 | 9.14 | 108.2 | 24.9 | 14.56 | 2.16 | 5.09 |
| 92.7 | 8.61 | 147.8 | 25.1 | 15.15 | 3.09 | 4.30 |
| 95.2 | 8.10 | 169.0 | 25.0 | 14.86 | 4.64 | 4.86 |
| 95.5 | 8.03 | 167.9 | 24.9 | 14.80 | 4.33 | 4.96 |
| 99.2 | 7.61 | 147.6 | 25.1 | 13.76 | 2.12 | 6.39 |
| 107.3 | 7.10 | 107.8 | 24.9 | 8.46 | 2.23 | 11.28 |
| 121.2 | 6.60 | 78.3 | 25.1 | 8.00 | 2.56 | 11.64 |
| 124.2 | 6.43 | 77.9 | 25.0 | 9.82 | 1.45 | 10.77 |
| 127.2 | 6.10 | 105.2 | 25.0 | 12.08 | 1.15 | 8.21 |
| 131.2 | 5.58 | 154.9 | 25.4 | 13.98 | 2.01 | 5.66 |
| 134.0 | 5.18 | 174.1 | 25.2 | 14.10 | 3.17 | 5.55 |
| 135.5 | 5.07 | 164.4 | 25.4 | 13.99 | 2.47 | 5.94 |
| 142.3 | 4.57 | 125.0 | 25.3 | 10.57 | 2.15 | 9.46 |
| 153.1 | 4.06 | 91.6 | 25.3 | 9.34 | 2.38 | 10.34 |
| 167.3 | 3.61 | 78.6 | 25.6 | 9.63 | 1.30 | 10.77 |
| 167.8 | 3.54 | 82.1 | 25.4 | 9.71 | 1.23 | 10.72 |
| 175.4 | 3.05 | 136.2 | 25.4 | 10.84 | .76 | 8.77 |
| 181.8 | 2.58 | 163.5 | 25.7 | 10.11 | 1.17 | 8.46 |
| 183.5 | 2.54 | 149.0 | 25.6 | 9.15 | 1.13 | 10.10 |
| 200.1 | 2.20 | 80.2 | 25.6 | 9.95 | .77 | 10.74 |
| 203.9 | 2.00 | 105.9 | 25.4 | 9.65 | .47 | 10.58 |
| 215.0 | 1.51 | 152.8 | 25.7 | 10.58 | .27 | 10.11 |
| 217.0 | 1.49 | 143.3 | 25.8 | 10.58 | .58 | 8.97 |
| 233.1 | 1.17 | 83.5 | 26.0 | 9.02 | .64 | 11.71 |
| 236.1 | 1.02 | 102.7 | 26.0 | 8.50 | .41 | 12.05 |
| 255.6 | .49 | 131.3 | 26.1 | 6.06 | .50 | 14.58 |

RESULTATS (AVEC HC<0 CONSERVE)

TITRE: 13KW-2
FICHIER: 160912

| TEMPS MIN. | P.INI KG | P.FIN KG | INPUT MJ | OUTPUT MJ | CO gr | HC gr |
|---|---|---|---|---|---|---|
| 1.6 | 17.30 | 16.77 | 6.65 | .74 | 75 | 46 |
| 3.1 | 16.77 | 16.43 | 4.34 | .47 | 126 | 79 |
| 4.6 | 16.43 | 16.13 | 3.91 | .40 | 171 | 112 |
| 5.7 | 16.13 | 15.95 | 2.36 | .26 | 196 | 132 |
| 6.4 | 15.95 | 15.70 | 3.42 | .57 | 227 | 159 |
| 9.7 | 15.70 | 15.33 | 5.07 | 1.24 | 268 | 196 |
| 13.2 | 15.33 | 14.97 | 5.12 | 1.38 | 303 | 234 |
| 17.2 | 14.97 | 14.58 | 5.59 | 1.89 | 337 | 271 |
| 23.2 | 14.58 | 14.18 | 5.76 | 1.98 | 370 | 310 |
| 29.8 | 14.18 | 13.79 | 5.77 | 1.88 | 417 | 350 |
| 39.3 | 13.79 | 13.56 | 3.39 | 1.00 | 454 | 375 |
| 40.1 | 13.56 | 13.36 | 3.05 | .79 | 467 | 405 |
| 42.1 | 13.36 | 12.95 | 6.14 | 1.56 | 533 | 457 |
| 43.8 | 12.95 | 12.50 | 6.98 | 1.62 | 618 | 518 |
| 45.4 | 12.50 | 12.12 | 5.91 | 1.35 | 695 | 570 |
| 46.4 | 12.12 | 11.72 | 6.34 | 1.53 | 775 | 624 |
| 48.1 | 11.72 | 11.39 | 5.39 | 1.27 | 845 | 672 |
| 48.9 | 11.39 | 11.20 | 3.00 | .62 | 885 | 700 |
| 49.9 | 11.20 | 10.89 | 5.03 | 1.31 | 938 | 744 |
| 53.4 | 10.89 | 10.46 | 7.11 | 3.05 | 984 | 789 |
| 58.9 | 10.46 | 10.02 | 7.39 | 3.67 | 1025 | 829 |
| 66.3 | 10.02 | 9.58 | 7.45 | 3.87 | 1082 | 864 |
| 75.4 | 9.58 | 9.14 | 7.51 | 3.63 | 1165 | 901 |
| 85.9 | 9.14 | 8.88 | 4.68 | 2.32 | 1221 | 923 |
| 87.4 | 8.88 | 8.65 | 3.98 | 2.13 | 1241 | 945 |
| 89.9 | 8.65 | 8.23 | 7.50 | 4.71 | 1288 | 969 |
| 92.7 | 8.23 | 7.77 | 8.45 | 4.98 | 1357 | 1000 |
| 95.2 | 7.77 | 7.51 | 4.89 | 2.38 | 1410 | 1025 |
| 95.5 | 7.51 | 7.29 | 4.16 | 2.09 | 1453 | 1045 |
| 99.2 | 7.29 | 6.87 | 8.10 | 5.10 | 1506 | 1072 |
| 107.3 | 6.87 | 6.41 | 9.09 | 5.86 | 1602 | 1092 |
| 121.2 | 6.41 | 6.11 | 6.15 | 3.97 | 1678 | 1107 |
| 124.2 | 6.11 | 5.88 | 4.61 | 3.11 | 1708 | 1121 |
| 127.2 | 5.88 | 5.49 | 8.18 | 6.30 | 1745 | 1133 |
| 131.2 | 5.49 | 5.07 | 9.21 | 7.07 | 1808 | 1140 |
| 134.0 | 5.07 | 4.83 | 5.29 | 3.55 | 1859 | 1152 |
| 135.5 | 4.83 | 4.55 | 6.40 | 4.52 | 1909 | 1164 |
| 142.3 | 4.55 | 4.08 | 10.90 | 7.75 | 2008 | 1185 |
| 153.1 | 4.08 | 3.63 | 10.85 | 8.06 | 2130 | 1197 |
| 167.3 | 3.63 | 3.39 | 6.10 | 4.81 | 2170 | 1206 |
| 167.8 | 3.39 | 3.13 | 6.63 | 5.27 | 2211 | 1214 |
| 175.4 | 3.13 | 2.68 | 11.98 | 11.99 | 2262 | 1178 |
| 181.8 | 2.68 | 2.44 | 6.60 | 7.59 | 2311 | 1131 |
| 183.5 | 2.44 | 2.26 | 4.88 | 4.97 | 2347 | 1110 |
| 200.1 | 2.26 | 2.00 | 7.38 | 6.13 | 2378 | 1120 |
| 203.9 | 2.00 | 1.67 | 9.58 | 9.19 | 2406 | 1106 |
| 215.0 | 1.67 | 1.43 | 7.38 | 6.41 | 2417 | 1108 |
| 217.0 | 1.43 | 1.27 | 4.98 | 5.29 | 2435 | 1088 |
| 233.1 | 1.27 | 1.04 | 7.08 | 5.89 | 2463 | 1099 |
| 236.1 | 1.04 | .72 | 10.35 | 9.25 | 2493 | 1099 |
| 255.6 | .72 | 0.00 | 24.33 | 19.23 | 2606 | 1122 |

RESULTATS (AVEC HC<0 CONSERVE)

FICHIER: 160912 13KW-2
NOMBRE DE POINTS DE MESURE= 51

MESURES DE CHEMINEE (100% CHARGE BRULEE)

POIDS SEC= 17.3 KG
DUREE =275 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
2606 grammes
12.7 g/MJ
569 g/Hre
HYDROCARBURES :
1122 grammes
5.4 g/MJ
245 g/Hre

INPUT : 342 MJ

OUTPUT : 206 MJ

PUISSANCE: 45 MJ/Hre

RENDEMENT:60.2 %

MESURES DE CHEMINEE (90.3% CHARGE BRULEE)

POIDS SEC= 15.6 KG
DUREE =209 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
2406 grammes
15.0 g/MJ
689 g/Hre
HYDROCARBURES :
1106 grammes
6.9 g/MJ
317 g/Hre

INPUT : 288 MJ

OUTPUT : 160 MJ

PUISSANCE: 46 MJ/Hre

RENDEMENT:55.5 %

MESURES AU PLENUM

| | | |
|---|---|---|
| FRACTION BRULEE | 95.8 % | 90.3 % |
| DUREE | 246 MIN | 209 MIN |
| DELTA T MOYEN | 19 C | 19 C |
| INPUT | 318 MJ | 288 MJ |
| OUTPUT | 191 MJ | 163 MJ |
| PUISSANCE: | 47 MJ/H | 47 MJ/H |
| RENDEMENT | 60 % | 56 % |

RESULTATS (AVEC HC<0 ELIMINE)

TITRE: 13KW-2
FICHIER: 160912

| TEMPS MIN. | P.INI KG | P.FIN KG | INPUT MJ | OUTPUT MJ | CO gr | HC gr |
|---|---|---|---|---|---|---|
| 1.6 | 17.30 | 16.77 | 6.65 | .74 | 75 | 46 |
| 3.1 | 16.77 | 16.43 | 4.34 | .47 | 126 | 79 |
| 4.6 | 16.43 | 16.13 | 3.91 | .40 | 171 | 112 |
| 5.7 | 16.13 | 15.95 | 2.36 | .26 | 196 | 132 |
| 6.4 | 15.95 | 15.70 | 3.42 | .57 | 227 | 159 |
| 9.7 | 15.70 | 15.33 | 5.07 | 1.24 | 268 | 196 |
| 13.2 | 15.33 | 14.97 | 5.12 | 1.38 | 303 | 234 |
| 17.2 | 14.97 | 14.58 | 5.59 | 1.89 | 337 | 271 |
| 23.2 | 14.58 | 14.18 | 5.76 | 1.98 | 370 | 310 |
| 29.8 | 14.18 | 13.79 | 5.77 | 1.88 | 417 | 350 |
| 39.3 | 13.79 | 13.56 | 3.39 | 1.00 | 454 | 375 |
| 40.1 | 13.56 | 13.36 | 3.05 | .79 | 467 | 405 |
| 42.1 | 13.36 | 12.95 | 6.14 | 1.56 | 533 | 457 |
| 43.8 | 12.95 | 12.50 | 6.98 | 1.62 | 618 | 518 |
| 45.4 | 12.50 | 12.12 | 5.91 | 1.35 | 695 | 570 |
| 46.4 | 12.12 | 11.72 | 6.34 | 1.53 | 775 | 624 |
| 48.1 | 11.72 | 11.39 | 5.39 | 1.27 | 845 | 672 |
| 48.9 | 11.39 | 11.20 | 3.00 | .62 | 885 | 700 |
| 49.9 | 11.20 | 10.89 | 5.03 | 1.31 | 938 | 744 |
| 53.4 | 10.89 | 10.46 | 7.11 | 3.05 | 984 | 789 |
| 58.9 | 10.46 | 10.02 | 7.39 | 3.67 | 1025 | 829 |
| 66.3 | 10.02 | 9.58 | 7.45 | 3.87 | 1082 | 864 |
| 75.4 | 9.58 | 9.14 | 7.51 | 3.63 | 1165 | 901 |
| 85.9 | 9.14 | 8.88 | 4.68 | 2.32 | 1221 | 923 |
| 87.4 | 8.88 | 8.65 | 3.98 | 2.13 | 1241 | 945 |
| 89.9 | 8.65 | 8.23 | 7.50 | 4.71 | 1288 | 969 |
| 92.7 | 8.23 | 7.77 | 8.45 | 4.98 | 1357 | 1000 |
| 95.2 | 7.77 | 7.51 | 4.89 | 2.38 | 1410 | 1025 |
| 95.5 | 7.51 | 7.29 | 4.16 | 2.09 | 1453 | 1045 |
| 99.2 | 7.29 | 6.87 | 8.10 | 5.10 | 1506 | 1072 |
| 107.3 | 6.87 | 6.41 | 9.09 | 5.86 | 1602 | 1092 |
| 121.2 | 6.41 | 6.11 | 6.15 | 3.97 | 1678 | 1107 |
| 124.2 | 6.11 | 5.88 | 4.61 | 3.11 | 1708 | 1121 |
| 127.2 | 5.88 | 5.49 | 8.18 | 6.30 | 1745 | 1133 |
| 131.2 | 5.49 | 5.07 | 9.21 | 7.07 | 1808 | 1140 |
| 134.0 | 5.07 | 4.83 | 5.29 | 3.55 | 1859 | 1152 |
| 135.5 | 4.83 | 4.55 | 6.40 | 4.52 | 1909 | 1164 |
| 142.3 | 4.55 | 4.08 | 10.90 | 7.75 | 2008 | 1185 |
| 153.1 | 4.08 | 3.63 | 10.85 | 8.06 | 2130 | 1197 |
| 167.3 | 3.63 | 3.39 | 6.10 | 4.81 | 2170 | 1206 |
| 167.8 | 3.39 | 3.13 | 6.63 | 5.27 | 2211 | 1214 |
| 175.4 | 3.13 | 2.68 | 11.98 | 9.97 | 2262 | 1214 |
| 181.8 | 2.68 | 2.44 | 6.60 | 4.93 | 2311 | 1214 |
| 183.5 | 2.44 | 2.26 | 4.88 | 3.79 | 2347 | 1214 |
| 200.1 | 2.26 | 2.00 | 7.38 | 6.13 | 2378 | 1224 |
| 203.9 | 2.00 | 1.67 | 9.58 | 8.44 | 2406 | 1224 |
| 215.0 | 1.67 | 1.43 | 7.38 | 6.41 | 2417 | 1227 |
| 217.0 | 1.43 | 1.27 | 4.98 | 4.18 | 2435 | 1227 |
| 233.1 | 1.27 | 1.04 | 7.08 | 5.89 | 2463 | 1237 |
| 236.1 | 1.04 | .72 | 10.35 | 9.25 | 2493 | 1238 |
| 255.6 | .72 | 0.00 | 24.33 | 19.23 | 2606 | 1260 |

RESULTATS (AVEC HC<0 ELIMINE)

FICHIER: 160912 13KW-2
NOMBRE DE POINTS DE MESURE= 51

MESURES DE CHEMINEE (100% CHARGE BRULEE)

POIDS SEC= 17.3 KG
DUREE =275 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
2606 grammes
13.1 g/MJ
569 g/Hre
HYDROCARBURES :
1260 grammes
6.4 g/MJ
275 g/Hre

INPUT : 342 MJ

OUTPUT : 198 MJ

PUISSANCE: 43 MJ/Hre

RENDEMENT:57.9 %

MESURES DE CHEMINEE (90.3% CHARGE BRULEE)

POIDS SEC= 15.6 KG
DUREE =209 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
2406 grammes
15.7 g/MJ
689 g/Hre
HYDROCARBURES :
1224 grammes
8.0 g/MJ
351 g/Hre

INPUT : 288 MJ

OUTPUT : 153 MJ

PUISSANCE: 44 MJ/Hre

RENDEMENT:53.2 %

MESURES AU PLENUM

| | | |
|---|---|---|
| FRACTION BRULEE | 95.8 % | 90.3 % |
| DUREE | 246 MIN | 209 MIN |
| DELTA T MOYEN | 19 C | 19 C |
| INPUT | 318 MJ | 288 MJ |
| OUTPUT | 191 MJ | 163 MJ |
| PUISSANCE: | 47 MJ/H | 47 MJ/H |
| RENDEMENT | 60 % | 56 % |

ICHIER: 190912
ITRE: 0 PUISS-2
OIDS INITIAL (BASE HUMIDE)=20.86KG
UMIDITE DU BOIS=15%
OIDS INTIAL (BASE SECHE)17.73KG
INTERVALLE DE LECTURE (%) 2.5
MBRE. DE LECTURES AU CHANGEMENT D'ETAT 1

| TEMPS MIN. | POIDS KG | T.CH. C | T.AMB C | CO2 % | CO % | O2 % |
|---|---|---|---|---|---|---|
| 2.3 | 20.22 | 119.2 | 25.9 | 14.52 | 4.28 | 5.14 |
| 4.1 | 19.74 | 137.3 | 26.0 | 15.97 | 5.86 | 3.49 |
| 5.4 | 19.28 | 148.8 | 26.0 | 15.75 | 5.79 | 3.47 |
| 6.6 | 18.96 | 153.2 | 25.9 | 12.99 | 2.60 | 6.25 |
| 7.9 | 18.77 | 145.8 | 26.0 | 11.84 | 2.51 | 7.84 |
| 12.3 | 18.23 | 120.7 | 25.9 | 13.33 | 3.33 | 6.86 |
| 16.7 | 17.63 | 109.2 | 26.1 | 14.11 | 3.95 | 6.11 |
| 19.8 | 17.19 | 105.5 | 25.9 | 14.86 | 4.54 | 5.47 |
| 23.6 | 16.57 | 104.5 | 26.1 | 16.44 | 5.94 | 3.83 |
| 26.1 | 16.14 | 105.5 | 26.1 | 15.64 | 4.96 | 4.08 |
| 29.8 | 15.59 | 106.0 | 26.1 | 15.01 | 3.78 | 4.63 |
| 34.2 | 15.05 | 106.0 | 26.2 | 15.19 | 3.93 | 4.59 |
| 38.6 | 14.56 | 106.5 | 26.3 | 15.22 | 3.37 | 4.35 |
| 43.6 | 13.99 | 107.2 | 26.1 | 15.13 | 3.06 | 4.60 |
| 48.6 | 13.50 | 107.8 | 26.3 | 15.14 | 2.35 | 4.77 |
| 54.3 | 13.00 | 106.9 | 26.1 | 14.53 | 2.27 | 5.40 |
| 62.0 | 12.41 | 103.8 | 26.3 | 12.07 | 2.61 | 7.34 |
| 68.3 | 11.97 | 98.6 | 26.2 | 10.95 | 2.92 | 8.66 |
| 75.2 | 11.43 | 92.8 | 26.1 | 12.40 | 2.67 | 7.66 |
| 82.1 | 10.89 | 93.0 | 26.3 | 13.48 | 2.81 | 6.31 |
| 88.3 | 10.41 | 95.0 | 26.5 | 12.66 | 2.74 | 7.17 |
| 95.2 | 9.87 | 95.1 | 26.3 | 14.10 | 2.65 | 5.97 |
| 101.5 | 9.36 | 97.3 | 26.4 | 15.20 | 2.74 | 4.95 |
| 107.1 | 8.81 | 99.7 | 26.4 | 15.43 | 2.73 | 4.58 |
| 113.4 | 8.30 | 102.9 | 26.5 | 14.97 | 2.61 | 5.03 |
| 121.8 | 7.75 | 101.1 | 26.6 | 13.20 | 2.62 | 6.48 |
| 129.3 | 7.27 | 94.8 | 26.8 | 11.81 | 2.69 | 7.66 |
| 142.4 | 6.75 | 85.9 | 26.9 | 11.03 | 2.88 | 8.05 |
| 155.6 | 6.25 | 81.4 | 27.0 | 9.58 | 2.90 | 9.34 |
| 171.8 | 5.71 | 78.3 | 26.9 | 10.05 | 2.98 | 8.86 |
| 185.2 | 5.21 | 77.3 | 26.9 | 9.91 | 3.00 | 8.92 |
| 203.4 | 4.68 | 75.3 | 26.8 | 9.67 | 3.10 | 9.15 |
| 226.6 | 4.16 | 73.9 | 27.6 | 9.54 | 2.63 | 9.20 |
| 248.1 | 3.61 | 70.8 | 27.4 | 9.92 | 1.83 | 9.29 |
| 280.1 | 3.12 | 69.0 | 27.3 | 10.23 | 1.51 | 9.20 |
| 318.0 | 2.61 | 62.9 | 27.4 | 9.32 | 1.60 | 9.96 |
| 356.3 | 2.08 | 61.6 | 27.4 | 10.58 | 1.89 | 9.27 |
| 385.4 | 1.56 | 63.2 | 27.7 | 9.87 | 1.59 | 9.40 |
| 419.9 | 1.03 | 64.3 | 27.4 | 10.63 | 1.47 | 8.89 |
| 454.7 | .51 | 64.8 | 27.7 | 9.58 | 2.04 | 9.55 |

TITRE: RESULTATS (AVEC HC<0 CONSERVE)

FICHIER: 0 PUISS-2
190912

| TEMPS MIN. | P.INI KG | P.FIN KG | INPUT MJ | OUTPUT MJ | CO gr | HC gr |
|---|---|---|---|---|---|---|
| 2.3 | 17.73 | 17.14 | 7.43 | 1.14 | 75 | 50 |
| 4.1 | 17.14 | 16.82 | 4.15 | .47 | 123 | 82 |
| 5.4 | 16.82 | 16.54 | 3.59 | .48 | 165 | 111 |
| 6.6 | 16.54 | 16.36 | 2.42 | .73 | 184 | 124 |
| 7.9 | 16.36 | 16.10 | 3.55 | .94 | 213 | 146 |
| 12.3 | 16.10 | 15.68 | 5.73 | 1.14 | 263 | 193 |
| 16.7 | 15.68 | 15.30 | 5.42 | 1.02 | 313 | 242 |
| 19.8 | 15.30 | 14.90 | 5.72 | .97 | 368 | 297 |
| 23.6 | 14.90 | 14.50 | 5.82 | .87 | 430 | 356 |
| 26.1 | 14.50 | 14.12 | 5.60 | 1.22 | 487 | 407 |
| 29.8 | 14.12 | 13.69 | 6.43 | 1.86 | 543 | 459 |
| 34.2 | 13.69 | 13.28 | 6.24 | 1.79 | 598 | 511 |
| 38.6 | 13.28 | 12.85 | 6.57 | 2.28 | 651 | 559 |
| 43.6 | 12.85 | 12.42 | 6.76 | 2.51 | 702 | 608 |
| 48.6 | 12.42 | 12.01 | 6.50 | 2.73 | 741 | 650 |
| 54.3 | 12.01 | 11.55 | 7.31 | 3.20 | 786 | 696 |
| 62.0 | 11.55 | 11.12 | 7.02 | 3.28 | 844 | 734 |
| 68.3 | 11.12 | 10.71 | 6.82 | 2.92 | 909 | 775 |
| 75.2 | 10.71 | 10.24 | .7.75 | 3.46 | 971 | 824 |
| 82.1 | 10.24 | 9.80 | 7.54 | 3.73 | 1030 | 865 |
| 88.3 | 9.80 | 9.35 | 7.70 | 3.92 | 1093 | 904 |
| 95.2 | 9.35 | 8.89 | 8.11 | 4.30 | 1152 | 945 |
| 101.5 | 8.89 | 8.42 | 8.43 | 4.64 | 1212 | 986 |
| 107.1 | 8.42 | 7.96 | 8.59 | 5.05 | 1273 | 1022 |
| 113.4 | 7.96 | 7.48 | 8.91 | 5.47 | 1336 | 1055 |
| 121.8 | 7.48 | 7.02 | 8.97 | 5.86 | 1410 | 1081 |
| 129.3 | 7.02 | 6.56 | 8.93 | 6.06 | 1494 | 1100 |
| 142.4 | 6.56 | 6.10 | 9.42 | 6.80 | 1597 | 1111 |
| 155.6 | 6.10 | 5.62 | 10.04 | 7.52 | 1725 | 1115 |
| 171.8 | 5.62 | 5.14 | 10.41 | 7.94 | 1856 | 1118 |
| 185.2 | 5.14 | 4.67 | 10.65 | 8.35 | 1995 | 1117 |
| 203.4 | 4.67 | 4.18 | 11.35 | 8.92 | 2152 | 1116 |
| 226.6 | 4.18 | 3.68 | 12.13 | 10.61 | 2310 | 1096 |
| 248.1 | 3.68 | 3.19 | 12.47 | 11.60 | 2430 | 1072 |
| 280.1 | 3.19 | 2.72 | 12.46 | 11.80 | 2529 | 1049 |
| 318.0 | 2.72 | 2.23 | 13.56 | 13.19 | 2656 | 1016 |
| 356.3 | 2.23 | 1.73 | 14.37 | 11.91 | 2785 | 1027 |
| 385.4 | 1.73 | 1.24 | 15.19 | 14.89 | 2923 | 992 |
| 419.9 | 1.24 | .74 | 16.01 | 15.17 | 3049 | 971 |
| 454.7 | .74 | 0.00 | 24.88 | 22.94 | 3338 | 935 |

RESULTATS (AVEC HC<0 CONSERVE)

FICHIER: 190912 0 PUISS-2
NOMBRE DE POINTS DE MESURE= 40

MESURES DE CHEMINEE (100% CHARGE BRULEE)

POIDS SEC= 17.7 KG
DUREE =490 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
3338 grammes
14.9 g/MJ
409 g/Hre

HYDROCARBURES :
935 grammes
4.2 g/MJ
114 g/Hre

INPUT : 351 MJ

OUTPUT : 224 MJ

PUISSANCE: 27 MJ/Hre

RENDEMENT:63.7 %

MESURES DE CHEMINEE (90.2% CHARGE BRULEE)

POIDS SEC= 16.0 KG
DUREE =371 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
2785 grammes
16.3 g/MJ
451 g/Hre

HYDROCARBURES :
1027 grammes
6.0 g/MJ
166 g/Hre

INPUT : 295 MJ

OUTPUT : 171 MJ

PUISSANCE: 28 MJ/Hre

RENDEMENT:57.9 %

MESURES AU PLENUM

| | | |
|---|---|---|
| FRACTION BRULEE | 95.8 % | 90.2 % |
| DUREE | 437 MIN | 371 MIN |
| DELTA T MOYEN | 13 C | 13 C |
| INPUT | 326 MJ | 295 MJ |
| OUTPUT | 221 MJ | 198 MJ |
| PUISSANCE: | 30 MJ/H | 32 MJ/H |
| RENDEMENT | 68 % | 67 % |

RESULTATS (AVEC HC<0 ELIMINE)

TITRE: 0 PUISS-2
FICHIER: 190912

| TEMPS MIN. | P.INI KG | P.FIN KG | INPUT MJ | OUTPUT MJ | CO gr | HC gr |
|---|---|---|---|---|---|---|
| 2.3 | 17.73 | 17.14 | 7.43 | 1.14 | 75 | 50 |
| 4.1 | 17.14 | 16.82 | 4.15 | .47 | 123 | 82 |
| 5.4 | 16.82 | 16.54 | 3.59 | .48 | 165 | 111 |
| 6.6 | 16.54 | 16.36 | 2.42 | .73 | 184 | 124 |
| 7.9 | 16.36 | 16.10 | 3.55 | .94 | 213 | 146 |
| 12.3 | 16.10 | 15.68 | 5.73 | 1.14 | 263 | 193 |
| 16.7 | 15.68 | 15.30 | 5.42 | 1.02 | 313 | 242 |
| 19.8 | 15.30 | 14.90 | 5.72 | .97 | 368 | 297 |
| 23.6 | 14.90 | 14.50 | 5.82 | .87 | 430 | 356 |
| 26.1 | 14.50 | 14.12 | 5.60 | 1.22 | 487 | 407 |
| 29.8 | 14.12 | 13.69 | 6.43 | 1.86 | 543 | 459 |
| 34.2 | 13.69 | 13.28 | 6.24 | 1.79 | 598 | 511 |
| 38.6 | 13.28 | 12.85 | 6.57 | 2.28 | 651 | 559 |
| 43.6 | 12.85 | 12.42 | 6.76 | 2.51 | 702 | 608 |
| 48.6 | 12.42 | 12.01 | 6.50 | 2.73 | 741 | 650 |
| 54.3 | 12.01 | 11.55 | 7.31 | 3.20 | 786 | 696 |
| 62.0 | 11.55 | 11.12 | 7.02 | 3.28 | 844 | 734 |
| 68.3 | 11.12 | 10.71 | 6.82 | 2.92 | 909 | 775 |
| 75.2 | 10.71 | 10.24 | 7.75 | 3.46 | 971 | 824 |
| 82.1 | 10.24 | 9.80 | 7.54 | 3.73 | 1030 | 865 |
| 88.3 | 9.80 | 9.35 | 7.70 | 3.92 | 1093 | 904 |
| 95.2 | 9.35 | 8.89 | 8.11 | 4.30 | 1152 | 945 |
| 101.5 | 8.89 | 8.42 | 8.43 | 4.64 | 1212 | 986 |
| 107.1 | 8.42 | 7.96 | 8.59 | 5.05 | 1273 | 1022 |
| 113.4 | 7.96 | 7.48 | 8.91 | 5.47 | 1336 | 1055 |
| 121.8 | 7.48 | 7.02 | 8.97 | 5.86 | 1410 | 1081 |
| 129.3 | 7.02 | 6.56 | 8.93 | 6.06 | 1494 | 1100 |
| 142.4 | 6.56 | 6.10 | 9.42 | 6.80 | 1597 | 1111 |
| 155.6 | 6.10 | 5.62 | 10.04 | 7.52 | 1725 | 1115 |
| 171.8 | 5.62 | 5.14 | 10.41 | 7.94 | 1856 | 1118 |
| 185.2 | 5.14 | 4.67 | 10.65 | 8.30 | 1995 | 1118 |
| 203.4 | 4.67 | 4.18 | 11.35 | 8.83 | 2152 | 1118 |
| 226.6 | 4.18 | 3.68 | 12.13 | 9.49 | 2310 | 1118 |
| 248.1 | 3.68 | 3.19 | 12.47 | 10.27 | 2430 | 1118 |
| 280.1 | 3.19 | 2.72 | 12.46 | 10.54 | 2529 | 1118 |
| 318.0 | 2.72 | 2.23 | 13.56 | 11.33 | 2656 | 1118 |
| 356.3 | 2.23 | 1.73 | 14.37 | 11.91 | 2785 | 1129 |
| 385.4 | 1.73 | 1.24 | 15.19 | 12.93 | 2923 | 1129 |
| 419.9 | 1.24 | .74 | 16.01 | 14.03 | 3049 | 1129 |
| 454.7 | .74 | 0.00 | 24.88 | 20.92 | 3338 | 1129 |

RESULTATS (AVEC HC<0 ELIMINE)

FICHIER: 190912 0 PUISS-2
NOMBRE DE POINTS DE MESURE= 40

MESURES DE CHEMINEE (100% CHARGE BRULEE)

POIDS SEC= 17.7 KG
DUREE =490 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
3338 grammes
15.7 g/MJ
409 g/Hre
HYDROCARBURES :
1129 grammes
5.3 g/MJ
138 g/Hre

INPUT : 351 MJ

OUTPUT : 213 MJ

PUISSANCE: 26 MJ/Hre

RENDEMENT:60.7 %

MESURES DE CHEMINEE (90.2% CHARGE BRULEE)

POIDS SEC= 16.0 KG
DUREE =371 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
2785 grammes
16.9 g/MJ
451 g/Hre
HYDROCARBURES :
1129 grammes
6.8 g/MJ
183 g/Hre

INPUT : 295 MJ

OUTPUT : 165 MJ

PUISSANCE: 27 MJ/Hre

RENDEMENT:56.0 %

MESURES AU PLENUM

| | | |
|---|---|---|
| FRACTION BRULEE | 95.8 % | 90.2 % |
| DUREE | 437 MIN | 371 MIN |
| DELTA T MOYEN | 13 C | 13 C |
| INPUT | 326 MJ | 295 MJ |
| OUTPUT | 221 MJ | 198 MJ |
| PUISSANCE: | 30 MJ/H | 32 MJ/H |
| RENDEMENT | 68 % | 67 % |

# MESURES

FICHIER: 200914
TITRE: 0 PUISS.-3
POIDS INITIAL (BASE HUMIDE)=21.00KG
HUMIDITE DU BOIS=15%
POIDS INTIAL (BASE SECHE)17.85KG
INTERVALLE DE LECTURE [%] 2.5
NBRE. DE LECTURES AU CHANGEMENT D'ETAT 1

| TEMPS MIN. | POIDS KG | T.CH. C | T.AMB C | CO2 % | CO % | O2 % |
|---|---|---|---|---|---|---|
| 4.8 | 20.41 | 108.3 | 27.6 | 8.57 | .70 | 12.17 |
| 8.5 | 20.30 | 102.0 | 27.5 | 6.49 | 1.94 | 13.46 |
| 16.7 | 19.92 | 73.4 | 27.4 | 8.43 | 1.93 | 11.97 |
| 25.4 | 19.36 | 65.7 | 27.5 | 11.93 | 2.84 | 8.27 |
| 31.1 | 18.84 | 69.3 | 27.4 | 12.33 | 3.15 | 7.72 |
| 36.7 | 18.29 | 72.3 | 27.5 | 13.13 | 4.00 | 6.95 |
| 41.1 | 17.83 | 75.1 | 27.6 | 12.81 | 3.14 | 7.18 |
| 46.1 | 17.31 | 77.7 | 27.6 | 12.26 | 2.97 | 7.30 |
| 51.7 | 16.75 | 79.8 | 27.9 | 12.97 | 2.97 | 6.83 |
| 55.5 | 16.26 | 84.5 | 27.6 | 15.41 | 4.62 | 4.14 |
| 59.2 | 15.68 | 91.2 | 27.6 | 15.07 | 5.16 | 4.72 |
| 62.6 | 15.16 | 95.0 | 27.3 | 14.80 | 4.38 | 4.81 |
| 65.7 | 14.69 | 97.1 | 27.5 | 15.15 | 4.60 | 4.60 |
| 68.9 | 14.17 | 98.3 | 27.5 | 15.00 | 5.44 | 4.51 |
| 72.6 | 13.60 | 98.5 | 27.6 | 15.35 | 5.18 | 4.35 |
| 75.8 | 13.10 | 98.7 | 27.7 | 15.13 | 4.70 | 4.54 |
| 78.9 | 12.60 | 98.9 | 27.7 | 15.84 | 5.09 | 3.83 |
| 82.7 | 12.00 | 101.0 | 27.9 | 16.03 | 5.51 | 3.56 |
| 85.8 | 11.44 | 103.2 | 27.9 | 16.01 | 6.65 | 3.53 |
| 88.3 | 10.94 | 105.0 | 27.8 | 16.09 | 6.76 | 3.52 |
| 90.8 | 10.46 | 106.1 | 27.7 | 16.03 | 6.09 | 3.51 |
| 93.9 | 9.91 | 106.9 | 27.7 | 15.92 | 5.50 | 3.50 |
| 97.1 | 9.38 | 106.9 | 27.7 | 15.84 | 5.95 | 3.38 |
| 100.2 | 8.83 | 107.2 | 27.8 | 15.83 | 5.95 | 3.37 |
| 102.7 | 8.37 | 107.6 | 27.7 | 16.07 | 5.42 | 3.25 |
| 106.5 | 7.86 | 107.3 | 27.7 | 15.72 | 4.24 | 3.57 |
| 111.5 | 7.29 | 105.3 | 27.8 | 15.86 | 3.26 | 3.71 |
| 116.5 | 6.80 | 105.1 | 27.7 | 14.92 | 2.27 | 4.30 |
| 123.6 | 6.29 | 102.4 | 27.8 | 12.40 | 1.81 | 6.83 |
| 135.5 | 5.77 | 89.5 | 27.8 | 11.44 | 1.97 | 7.77 |
| 148.7 | 5.24 | 84.0 | 27.8 | 11.09 | 1.89 | 8.00 |
| 168.7 | 4.72 | 77.0 | 27.8 | 10.09 | 2.33 | 8.66 |
| 194.6 | 4.20 | 72.5 | 27.7 | 10.48 | 1.81 | 8.50 |
| 223.4 | 3.67 | 70.4 | 27.7 | 9.83 | 1.67 | 9.14 |
| 261.2 | 3.13 | 68.3 | 27.8 | 10.07 | 1.63 | 9.04 |
| 297.0 | 2.61 | 65.1 | 27.7 | 9.34 | 1.67 | 9.59 |
| 334.3 | 2.10 | 64.6 | 27.8 | 9.30 | 1.24 | 10.19 |
| 374.1 | 1.57 | 61.4 | 27.6 | 9.28 | 1.51 | 10.09 |
| 422.7 | 1.03 | 59.0 | 27.7 | 8.20 | 1.57 | 11.17 |
| 469.2 | .51 | 58.0 | 27.6 | 8.20 | 1.57 | 11.17 |

RESULTATS (AVEC HC<0 CONSERVE)

TITRE: 0 PUISS.-3
FICHIER: 200914

| TEMPS MIN. | P.INI KG | P.FIN KG | INPUT MJ | OUTPUT MJ | CO gr | HC gr |
|---|---|---|---|---|---|---|
| 4.8 | 17.85 | 17.42 | 5.42 | 1.49 | 19 | 28 |
| 8.5 | 17.42 | 17.25 | 2.08 | .44 | 42 | 39 |
| 16.7 | 17.25 | 16.93 | 4.16 | .89 | 77 | 67 |
| 25.4 | 16.93 | 16.55 | 4.99 | 1.12 | 119 | 104 |
| 31.1 | 16.55 | 16.17 | 5.17 | 1.17 | 165 | 144 |
| 36.7 | 16.17 | 15.80 | 5.10 | .97 | 216 | 189 |
| 41.1 | 15.80 | 15.43 | 5.12 | 1.29 | 260 | 230 |
| 46.1 | 15.43 | 15.03 | 5.79 | 1.77 | 312 | 272 |
| 51.7 | 15.03 | 14.63 | 5.79 | 1.73 | 359 | 316 |
| 55.5 | 14.63 | 14.21 | 6.14 | 1.54 | 420 | 369 |
| 59.2 | 14.21 | 13.78 | 6.48 | 1.40 | 489 | 430 |
| 62.6 | 13.78 | 13.38 | 6.00 | 1.65 | 547 | 481 |
| 65.7 | 13.38 | 12.98 | 6.15 | 1.66 | 608 | 534 |
| 68.9 | 12.98 | 12.54 | 6.91 | 1.79 | 684 | 595 |
| 72.6 | 12.54 | 12.10 | 6.98 | 1.97 | 758 | 655 |
| 75.8 | 12.10 | 11.68 | 6.69 | 2.15 | 825 | 709 |
| 78.9 | 11.68 | 11.22 | 7.54 | 2.48 | 902 | 769 |
| 82.7 | 11.22 | 10.73 | 8.10 | 2.75 | 990 | 832 |
| 85.8 | 10.73 | 10.27 | 7.60 | 2.41 | 1082 | 894 |
| 88.3 | 10.27 | 9.85 | 7.24 | 2.40 | 1170 | 951 |
| 90.8 | 9.85 | 9.40 | 7.80 | 2.96 | 1262 | 1007 |
| 93.9 | 9.40 | 8.92 | 8.32 | 3.60 | 1355 | 1059 |
| 97.1 | 8.92 | 8.45 | 8.59 | 3.83 | 1459 | 1110 |
| 100.2 | 8.45 | 8.00 | 8.28 | 3.89 | 1560 | 1156 |
| 102.7 | 8.00 | 7.56 | 8.15 | 4.14 | 1654 | 1197 |
| 106.5 | 7.56 | 7.07 | 9.37 | 5.53 | 1750 | 1232 |
| 111.5 | 7.07 | 6.60 | 9.49 | 6.21 | 1830 | 1260 |
| 116.5 | 6.60 | 6.14 | 9.24 | 7.21 | 1896 | 1267 |
| 123.6 | 6.14 | 5.67 | 9.91 | 8.34 | 1967 | 1262 |
| 135.5 | 5.67 | 5.19 | 10.45 | 8.87 | 2054 | 1255 |
| 148.7 | 5.19 | 4.70 | 10.91 | 9.77 | 2147 | 1239 |
| 168.7 | 4.70 | 4.21 | 11.33 | 10.27 | 2275 | 1215 |
| 194.6 | 4.21 | 3.73 | 11.80 | 11.35 | 2383 | 1184 |
| 223.4 | 3.73 | 3.23 | 12.68 | 12.74 | 2500 | 1141 |
| 261.2 | 3.23 | 2.73 | 13.20 | 13.08 | 2618 | 1103 |
| 297.0 | 2.73 | 2.24 | 13.48 | 13.99 | 2754 | 1050 |
| 334.3 | 2.24 | 1.75 | 14.37 | 14.42 | 2864 | 1012 |
| 374.1 | 1.75 | 1.24 | 15.42 | 15.06 | 3005 | 977 |
| 422.7 | 1.24 | .74 | 16.12 | 15.64 | 3178 | 940 |
| 469.2 | .74 | 0.00 | 24.94 | 24.14 | 3447 | 884 |

RESULTATS (AVEC HC<0 CONSERVE)

FICHIER: 200914 0 PUISS.-3
NOMBRE DE POINTS DE MESURE= 40

MESURES DE CHEMINEE (100% CHARGE BRULEE)

POIDS SEC= 17.8 KG
DUREE =495 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
3447 grammes
15.1 g/MJ
418 g/Hre

HYDROCARBURES :
884 grammes
3.9 g/MJ
107 g/Hre

INPUT : 353 MJ

OUTPUT : 228 MJ

PUISSANCE: 28 MJ/Hre

RENDEMENT:64.6 %

MESURES DE CHEMINEE (90.2% CHARGE BRULEE)

POIDS SEC= 16.1 KG
DUREE =354 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
2864 grammes
16.5 g/MJ
485 g/Hre

HYDROCARBURES :
1012 grammes
5.8 g/MJ
171 g/Hre

INPUT : 297 MJ

OUTPUT : 173 MJ

PUISSANCE: 29 MJ/Hre

RENDEMENT:58.4 %

MESURES AU PLENUM

| | | |
|---|---|---|
| FRACTION BRULEE | 95.9 % | 90.2 % |
| DUREE | 446 MIN | 354 MIN |
| DELTA T MOYEN | 12 C | 13 C |
| INPUT | 328 MJ | 297 MJ |
| OUTPUT | 207 MJ | 179 MJ |
| PUISSANCE: | 28 MJ/H | 30 MJ/H |
| RENDEMENT | 63 % | 60 % |

RESULTATS (AVEC HC<0 ELIMINE)

TITRE: 0 PUISS.-3
FICHIER: 200914

| TEMPS MIN. | P.INI KG | P.FIN KG | INPUT MJ | OUTPUT MJ | CO gr | HC gr |
|---|---|---|---|---|---|---|
| 4.8 | 17.85 | 17.42 | 5.42 | 1.49 | 19 | 28 |
| 8.5 | 17.42 | 17.25 | 2.08 | .44 | 42 | 39 |
| 16.7 | 17.25 | 16.93 | 4.16 | .89 | 77 | 67 |
| 25.4 | 16.93 | 16.55 | 4.99 | 1.12 | 119 | 104 |
| 31.1 | 16.55 | 16.17 | 5.17 | 1.17 | 165 | 144 |
| 36.7 | 16.17 | 15.80 | 5.10 | .97 | 216 | 189 |
| 41.1 | 15.80 | 15.43 | 5.12 | 1.29 | 260 | 230 |
| 46.1 | 15.43 | 15.03 | 5.79 | 1.77 | 312 | 272 |
| 51.7 | 15.03 | 14.63 | 5.79 | 1.73 | 359 | 316 |
| 55.5 | 14.63 | 14.21 | 6.14 | 1.54 | 420 | 369 |
| 59.2 | 14.21 | 13.78 | 6.48 | 1.40 | 489 | 430 |
| 62.6 | 13.78 | 13.38 | 6.00 | 1.65 | 547 | 481 |
| 65.7 | 13.38 | 12.98 | 6.15 | 1.66 | 608 | 534 |
| 68.9 | 12.98 | 12.54 | 6.91 | 1.79 | 684 | 595 |
| 72.6 | 12.54 | 12.10 | 6.98 | 1.97 | 758 | 655 |
| 75.8 | 12.10 | 11.68 | 6.69 | 2.15 | 825 | 709 |
| 78.9 | 11.68 | 11.22 | 7.54 | 2.48 | 902 | 769 |
| 82.7 | 11.22 | 10.73 | 8.10 | 2.75 | 990 | 832 |
| 85.8 | 10.73 | 10.27 | 7.60 | 2.41 | 1082 | 894 |
| 88.3 | 10.27 | 9.85 | 7.24 | 2.40 | 1170 | 951 |
| 90.8 | 9.85 | 9.40 | 7.80 | 2.96 | 1262 | 1007 |
| 93.9 | 9.40 | 8.92 | 8.32 | 3.60 | 1355 | 1059 |
| 97.1 | 8.92 | 8.45 | 8.59 | 3.83 | 1459 | 1110 |
| 100.2 | 8.45 | 8.00 | 8.28 | 3.89 | 1560 | 1156 |
| 102.7 | 8.00 | 7.56 | 8.15 | 4.14 | 1654 | 1197 |
| 106.5 | 7.56 | 7.07 | 9.37 | 5.53 | 1750 | 1232 |
| 111.5 | 7.07 | 6.60 | 9.49 | 6.21 | 1830 | 1260 |
| 116.5 | 6.60 | 6.14 | 9.24 | 7.21 | 1896 | 1267 |
| 123.6 | 6.14 | 5.67 | 9.91 | 8.06 | 1967 | 1267 |
| 135.5 | 5.67 | 5.19 | 10.45 | 8.49 | 2054 | 1267 |
| 148.7 | 5.19 | 4.70 | 10.91 | 8.86 | 2147 | 1267 |
| 168.7 | 4.70 | 4.21 | 11.33 | 8.95 | 2275 | 1267 |
| 194.6 | 4.21 | 3.73 | 11.80 | 9.64 | 2383 | 1267 |
| 223.4 | 3.73 | 3.23 | 12.68 | 10.34 | 2500 | 1267 |
| 261.2 | 3.23 | 2.73 | 13.20 | 10.96 | 2618 | 1267 |
| 297.0 | 2.73 | 2.24 | 13.48 | 11.03 | 2754 | 1267 |
| 334.3 | 2.24 | 1.75 | 14.37 | 12.30 | 2864 | 1267 |
| 374.1 | 1.75 | 1.24 | 15.42 | 13.12 | 3005 | 1267 |
| 422.7 | 1.24 | .74 | 16.12 | 13.54 | 3178 | 1267 |
| 469.2 | .74 | 0.00 | 24.94 | 21.07 | 3447 | 1267 |

RESULTATS (AVEC HC<0 ELIMINE)

FICHIER: 200914 0 PUISS.-3
NOMBRE DE POINTS DE MESURE= 40

MESURES DE CHEMINEE (100% CHARGE BRULEE)

POIDS SEC= 17.8 KG
DUREE =495 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
3447 grammes
16.7 g/MJ
418 g/Hre

HYDROCARBURES :
1267 grammes
6.1 g/MJ
154 g/Hre

INPUT : 353 MJ

OUTPUT : 207 MJ

PUISSANCE: 25 MJ/Hre

RENDEMENT:58.5 %

MESURES DE CHEMINEE (90.2% CHARGE BRULEE)

POIDS SEC= 16.1 KG
DUREE =354 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
2864 grammes
18.0 g/MJ
485 g/Hre

HYDROCARBURES :
1267 grammes
8.0 g/MJ
215 g/Hre

INPUT : 297 MJ

OUTPUT : 159 MJ

PUISSANCE: 27 MJ/Hre

RENDEMENT:53.6 %

MESURES AU PLENUM

| | | |
|---|---|---|
| FRACTION BRULEE | 95.9 % | 90.2 % |
| DUREE | 446 MIN | 354 MIN |
| DELTA T MOYEN | 12 C | 13 C |
| INPUT | 328 MJ | 297 MJ |
| OUTPUT | 207 MJ | 179 MJ |
| PUISSANCE: | 28 MJ/H | 30 MJ/H |
| RENDEMENT | 63 % | 60 % |

# ANNEXE IV

Résultats détaillés

- Série no 3 -

CRIQ CENTRE DE RECHERCHE INDUSTRIELLE DU QUÉBEC

MESURES

FICHIER: 231015
TITRE: FULL POWER-1-3
POIDS INITIAL (BASE HUMIDE)=18.42KG
HUMIDITE DU BOIS=15%
POIDS INTIAL (BASE SECHE)15.66KG
INTERVALLE DE LECTURE (%) 2.5
NBRE. DE LECTURES AU CHANGEMENT D'ETAT 1

| TEMPS MIN. | POIDS KG | T.CH. C | T.AMB C | CO2 % | CO % | O2 % |
|---|---|---|---|---|---|---|
| 1.7 | 17.73 | 185.7 | 22.5 | 16.41 | 8.60 | 1.67 |
| 2.3 | 17.46 | 187.3 | 22.3 | 16.60 | 8.56 | 1.56 |
| 3.6 | 16.93 | 190.1 | 22.3 | 16.56 | 9.00 | 1.49 |
| 4.8 | 16.33 | 191.7 | 22.2 | 16.30 | 8.36 | 1.47 |
| 5.4 | 16.05 | 192.9 | 22.2 | 16.30 | 8.36 | 1.47 |
| 6.7 | 15.54 | 195.3 | 22.3 | 16.24 | 7.84 | 1.44 |
| 8.0 | 15.05 | 196.0 | 22.2 | 16.41 | 7.45 | 1.48 |
| 9.2 | 14.55 | 196.6 | 22.1 | 16.09 | 7.29 | 1.57 |
| 10.5 | 14.10 | 196.6 | 22.3 | 15.97 | 7.19 | 1.64 |
| 11.8 | 13.66 | 195.9 | 22.2 | 15.88 | 6.83 | 1.57 |
| 13.0 | 13.22 | 195.1 | 22.6 | 15.90 | 6.82 | 1.57 |
| 14.3 | 12.81 | 194.3 | 22.7 | 15.88 | 6.66 | 1.44 |
| 15.6 | 12.39 | 193.7 | 22.8 | 15.95 | 6.04 | 1.38 |
| 17.4 | 11.81 | 192.4 | 22.8 | 15.41 | 5.73 | 1.57 |
| 18.7 | 11.44 | 193.8 | 22.8 | 15.18 | 4.96 | 1.80 |
| 20.6 | 10.95 | 197.1 | 22.8 | 15.57 | 3.75 | 1.82 |
| 22.5 | 10.52 | 204.0 | 23.6 | 15.66 | 3.34 | 1.86 |
| 24.4 | 10.11 | 212.8 | 24.2 | 15.95 | 2.61 | 2.00 |
| 26.9 | 9.58 | 218.1 | 24.3 | 15.58 | 4.55 | 1.46 |
| 28.8 | 9.17 | 207.5 | 24.3 | 16.04 | 3.95 | 1.45 |
| 31.3 | 8.61 | 201.3 | 24.4 | 16.03 | 3.50 | 1.55 |
| 33.2 | 8.23 | 198.9 | 24.5 | 15.96 | 3.24 | 1.60 |
| 35.8 | 7.76 | 197.6 | 24.5 | 15.65 | 2.83 | 1.89 |
| 38.3 | 7.35 | 198.7 | 24.5 | 15.64 | 2.46 | 2.11 |
| 41.5 | 6.82 | 200.2 | 24.6 | 15.45 | 2.44 | 2.12 |
| 44.0 | 6.43 | 200.7 | 24.7 | 15.41 | 2.11 | 2.52 |
| 47.1 | 5.95 | 201.6 | 24.8 | 15.44 | 1.56 | 2.77 |
| 50.3 | 5.52 | 203.4 | 25.0 | 15.11 | .85 | 3.19 |
| 54.1 | 5.04 | 206.5 | 25.0 | 14.89 | .65 | 3.77 |
| 58.5 | 4.55 | 205.3 | 25.1 | 13.97 | .41 | 5.11 |
| 63.2 | 4.11 | 199.8 | 25.2 | 13.34 | .37 | 5.75 |
| 67.6 | 3.66 | 197.3 | 25.3 | 12.72 | .37 | 6.40 |
| 73.3 | 3.17 | 191.3 | 25.2 | 11.72 | .21 | 7.74 |
| 79.0 | 2.69 | 184.8 | 25.3 | 15.12 | 1.00 | 4.24 |
| 82.2 | 2.24 | 207.5 | 25.4 | 14.33 | .47 | 4.41 |
| 85.9 | 1.82 | 206.6 | 25.2 | 13.45 | .13 | 5.81 |
| 91.0 | 1.38 | 194.3 | 25.2 | 12.00 | .11 | 7.50 |
| 98.0 | .90 | 182.3 | 25.4 | 11.15 | .16 | 8.60 |
| 105.5 | .45 | 181.8 | 25.5 | 10.00 | .18 | 9.60 |

RESULTATS (AVEC HC<0 CONSERVE)

TITRE: FULL POWER-1-3
FICHIER: 231015

| TEMPS MIN. | P.INI KG | P.FIN KG | INPUT MJ | OUTPUT MJ | CO gr | HC gr |
|---|---|---|---|---|---|---|
| 1.7 | 15.66 | 15.10 | 7.04 | .35 | 105 | 53 |
| 2.3 | 15.10 | 14.83 | 3.57 | .22 | 157 | 81 |
| 3.6 | 14.83 | 14.43 | 5.28 | .35 | 236 | 126 |
| 4.8 | 14.43 | 14.11 | 4.30 | .49 | 299 | 161 |
| 5.4 | 14.11 | 13.82 | 3.97 | .47 | 357 | 194 |
| 6.7 | 13.82 | 13.45 | 5.23 | .80 | 431 | 237 |
| 8.0 | 13.45 | 13.08 | 5.41 | .92 | 505 | 282 |
| 9.2 | 13.08 | 12.71 | 5.30 | 1.04 | 578 | 324 |
| 10.5 | 12.71 | 12.37 | 5.14 | 1.10 | 648 | 364 |
| 11.8 | 12.37 | 12.02 | 5.25 | 1.32 | 719 | 403 |
| 13.0 | 12.02 | 11.68 | 5.16 | 1.37 | 789 | 440 |
| 14.3 | 11.68 | 11.34 | 5.15 | 1.52 | 858 | 475 |
| 15.6 | 11.34 | 10.93 | 6.41 | 2.18 | 939 | 514 |
| 17.4 | 10.93 | 10.54 | 6.26 | 2.52 | 1021 | 545 |
| 18.7 | 10.54 | 10.18 | 5.73 | 2.68 | 1091 | 567 |
| 20.6 | 10.18 | 9.80 | 6.27 | 3.41 | 1153 | 585 |
| 22.5 | 9.80 | 9.44 | 5.87 | 3.43 | 1207 | 598 |
| 24.4 | 9.44 | 9.04 | 6.78 | 4.22 | 1257 | 611 |
| 26.9 | 9.04 | 8.63 | 6.95 | 3.98 | 1337 | 626 |
| 28.8 | 8.63 | 8.21 | 7.31 | 4.43 | 1412 | 640 |
| 31.3 | 8.21 | 7.79 | 7.31 | 4.88 | 1481 | 648 |
| 33.2 | 7.79 | 7.42 | 6.75 | 4.82 | 1543 | 650 |
| 35.8 | 7.42 | 7.02 | 7.19 | 5.61 | 1605 | 643 |
| 38.3 | 7.02 | 6.60 | 7.90 | 6.46 | 1666 | 632 |
| 41.5 | 6.60 | 6.19 | 7.94 | 6.92 | 1730 | 613 |
| 44.0 | 6.19 | 5.80 | 7.78 | 6.87 | 1785 | 594 |
| 47.1 | 5.80 | 5.38 | 8.51 | 7.97 | 1832 | 568 |
| 50.3 | 5.38 | 4.96 | 8.78 | 9.19 | 1862 | 525 |
| 54.1 | 4.96 | 4.52 | 9.67 | 10.07 | 1888 | 480 |
| 58.5 | 4.52 | 4.09 | 9.67 | 10.06 | 1906 | 438 |
| 63.2 | 4.09 | 3.68 | 9.62 | 10.34 | 1923 | 390 |
| 67.6 | 3.68 | 3.24 | 10.67 | 11.67 | 1943 | 333 |
| 73.3 | 3.24 | 2.78 | 11.55 | 12.56 | 1956 | 275 |
| 79.0 | 2.78 | 2.35 | 11.61 | 11.20 | 2002 | 248 |
| 82.2 | 2.35 | 1.93 | 11.47 | 13.17 | 2027 | 179 |
| 85.9 | 1.93 | 1.53 | 11.87 | 13.44 | 2035 | 114 |
| 91.0 | 1.53 | 1.09 | 13.38 | 14.97 | 2043 | 44 |
| 98.0 | 1.09 | .64 | 14.21 | 15.22 | 2057 | -14 |
| 105.5 | .64 | 0.00 | 21.74 | 24.44 | 2085 | -132 |

RESULTATS (AVEC HC<0 CONSERVE)

FICHIER: 231015 FULL POWER-1-3
NOMBRE DE POINTS DE MESURE= 39

MESURES DE CHEMINEE (100% CHARGE BRULEE)

POIDS SEC= 15.7 KG
DUREE =120 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
2085 grammes
8.8 g/MJ
1043 g/Hre
HYDROCARBURES :
-132 grammes
-.6 g/MJ
-66 g/Hre

INPUT : 310 MJ

OUTPUT : 237 MJ

PUISSANCE:118 MJ/Hre

RENDEMENT:76.3 %

MESURES DE CHEMINEE (90.3% CHARGE BRULEE)

POIDS SEC= 14.1 KG
DUREE = 88 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
2035 grammes
11.2 g/MJ
1380 g/Hre
HYDROCARBURES :
114 grammes
.6 g/MJ
77 g/Hre

INPUT : 261 MJ

OUTPUT : 182 MJ

PUISSANCE:123 MJ/Hre

RENDEMENT:69.8 %

MESURES AU PLENUM

| | | |
|---|---|---|
| FRACTION BRULEE | 95.9 % | 90.3 % |
| DUREE | 102 MIN | 88 MIN |
| DELTA T MOYEN | -80 C | -80 C |
| INPUT | 288 MJ | 261 MJ |
| OUTPUT | -340 MJ | -295 MJ |
| PUISSANCE: | MJ/H | MJ/H |
| RENDEMENT | -118 % | -113 % |

RESULTATS (AVEC HC<0 ELIMINE)

TITRE: FULL POWER-1-3
FICHIER: 231015

| TEMPS MIN. | P.INI KG | P.FIN KG | INPUT MJ | OUTPUT MJ | CO gr | HC gr |
|---|---|---|---|---|---|---|
| 1.7 | 15.66 | 15.10 | 7.04 | .35 | 105 | 53 |
| 2.3 | 15.10 | 14.83 | 3.57 | .22 | 157 | 81 |
| 3.6 | 14.83 | 14.43 | 5.28 | .35 | 236 | 126 |
| 4.8 | 14.43 | 14.11 | 4.30 | .49 | 299 | 161 |
| 5.4 | 14.11 | 13.82 | 3.97 | .47 | 357 | 194 |
| 6.7 | 13.82 | 13.45 | 5.23 | .80 | 431 | 237 |
| 8.0 | 13.45 | 13.08 | 5.41 | .92 | 505 | 282 |
| 9.2 | 13.08 | 12.71 | 5.30 | 1.04 | 578 | 324 |
| 10.5 | 12.71 | 12.37 | 5.14 | 1.10 | 648 | 364 |
| 11.8 | 12.37 | 12.02 | 5.25 | 1.32 | 719 | 403 |
| 13.0 | 12.02 | 11.68 | 5.16 | 1.37 | 789 | 440 |
| 14.3 | 11.68 | 11.34 | 5.15 | 1.52 | 858 | 475 |
| 15.6 | 11.34 | 10.93 | 6.41 | 2.18 | 939 | 514 |
| 17.4 | 10.93 | 10.54 | 6.26 | 2.52 | 1021 | 545 |
| 18.7 | 10.54 | 10.18 | 5.73 | 2.68 | 1091 | 567 |
| 20.6 | 10.18 | 9.80 | 6.27 | 3.41 | 1153 | 585 |
| 22.5 | 9.80 | 9.44 | 5.87 | 3.43 | 1207 | 598 |
| 24.4 | 9.44 | 9.04 | 6.78 | 4.22 | 1257 | 611 |
| 26.9 | 9.04 | 8.63 | 6.95 | 3.98 | 1337 | 626 |
| 28.8 | 8.63 | 8.21 | 7.31 | 4.43 | 1412 | 640 |
| 31.3 | 8.21 | 7.79 | 7.31 | 4.88 | 1481 | 648 |
| 33.2 | 7.79 | 7.42 | 6.75 | 4.82 | 1543 | 650 |
| 35.8 | 7.42 | 7.02 | 7.19 | 5.26 | 1605 | 650 |
| 38.3 | 7.02 | 6.60 | 7.90 | 5.84 | 1666 | 650 |
| 41.5 | 6.60 | 6.19 | 7.94 | 5.83 | 1730 | 650 |
| 44.0 | 6.19 | 5.80 | 7.78 | 5.82 | 1785 | 650 |
| 47.1 | 5.80 | 5.38 | 8.51 | 6.49 | 1832 | 650 |
| 50.3 | 5.38 | 4.96 | 8.78 | 6.76 | 1862 | 650 |
| 54.1 | 4.96 | 4.52 | 9.67 | 7.57 | 1888 | 650 |
| 58.5 | 4.52 | 4.09 | 9.67 | 7.69 | 1906 | 650 |
| 63.2 | 4.09 | 3.68 | 9.62 | 7.66 | 1923 | 650 |
| 67.6 | 3.68 | 3.24 | 10.67 | 8.48 | 1943 | 650 |
| 73.3 | 3.24 | 2.78 | 11.55 | 9.31 | 1956 | 650 |
| 79.0 | 2.78 | 2.35 | 11.61 | 9.70 | 2002 | 650 |
| 82.2 | 2.35 | 1.93 | 11.47 | 9.25 | 2027 | 650 |
| 85.9 | 1.93 | 1.53 | 11.87 | 9.80 | 2035 | 650 |
| 91.0 | 1.53 | 1.09 | 13.38 | 11.10 | 2043 | 650 |
| 98.0 | 1.09 | .64 | 14.21 | 11.96 | 2057 | 650 |
| 105.5 | .64 | 0.00 | 21.74 | 17.80 | 2085 | 650 |

RESULTATS (AVEC HC<0 ELIMINE)

FICHIER: 231015 FULL POWER-1-3
NOMBRE DE POINTS DE MESURE= 39

MESURES DE CHEMINEE (100% CHARGE BRULEE)

POIDS SEC= 15.7 KG
DUREE =120 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
2085 grammes
10.8 g/MJ
1043 g/Hre

HYDROCARBURES :
650 grammes
3.4 g/MJ
325 g/Hre

INPUT : 310 MJ

OUTPUT : 193 MJ

PUISSANCE: 96 MJ/Hre

RENDEMENT:62.2 %

MESURES DE CHEMINEE (90.3% CHARGE BRULEE)

POIDS SEC= 14.1 KG
DUREE = 88 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
2035 grammes
13.4 g/MJ
1380 g/Hre

HYDROCARBURES :
650 grammes
4.3 g/MJ
441 g/Hre

INPUT : 261 MJ

OUTPUT : 152 MJ

PUISSANCE:103 MJ/Hre

RENDEMENT:58.3 %

MESURES AU PLENUM

| | | |
|---|---|---|
| FRACTION BRULEE | 95.9 % | 90.3 % |
| DUREE | 102 MIN | 88 MIN |
| DELTA T MOYEN | -80 C | -80 C |
| INPUT | 288 MJ | 261 MJ |
| OUTPUT | -340 MJ | -295 MJ |
| PUISSANCE: | MJ/H | MJ/H |
| RENDEMENT | -118 % | -113 % |

# MESURES

FICHIER: 241010
TITRE: FULL POWER-2-3
POIDS INITIAL (BASE HUMIDE)=18.19KG
HUMIDITE DU BOIS=15%
POIDS INTIAL (BASE SECHE)15.47KG
INTERVALLE DE LECTURE (%) 2.5
NBRE. DE LECTURES AU CHANGEMENT D'ETAT 1

| TEMPS MIN. | POIDS KG | T.CH. C | T.AMB C | CO2 % | CO % | O2 % |
|---|---|---|---|---|---|---|
| 2.2 | 17.72 | 137.3 | 24.8 | 11.94 | 2.35 | 7.67 |
| 4.0 | 17.26 | 153.1 | 24.7 | 13.40 | 2.91 | 5.99 |
| 5.7 | 16.78 | 170.0 | 24.7 | 14.35 | 3.39 | 4.69 |
| 7.3 | 16.35 | 182.1 | 24.8 | 14.82 | 3.58 | 4.17 |
| 8.8 | 15.90 | 191.9 | 25.0 | 15.17 | 3.59 | 3.61 |
| 10.3 | 15.44 | 202.4 | 25.0 | 16.26 | 3.90 | 2.60 |
| 11.9 | 14.95 | 212.7 | 25.1 | 16.14 | 3.88 | 2.63 |
| 13.1 | 14.54 | 219.3 | 25.1 | 16.41 | 3.84 | 2.52 |
| 14.7 | 14.07 | 226.6 | 25.1 | 16.06 | 3.74 | 2.55 |
| 16.2 | 13.62 | 231.0 | 25.0 | 15.79 | 3.83 | 2.86 |
| 17.7 | 13.16 | 232.7 | 25.0 | 16.15 | 3.74 | 2.56 |
| 19.2 | 12.71 | 234.4 | 25.1 | 16.61 | 3.92 | 2.32 |
| 20.8 | 12.25 | 235.6 | 25.0 | 17.02 | 3.66 | 1.54 |
| 22.3 | 11.82 | 233.2 | 25.0 | 16.90 | 3.63 | 1.65 |
| 24.1 | 11.30 | 231.3 | 24.9 | 17.15 | 3.63 | 1.50 |
| 25.6 | 10.89 | 230.0 | 25.0 | 15.97 | 3.87 | 2.33 |
| 27.4 | 10.42 | 227.8 | 25.0 | 15.75 | 3.58 | 2.63 |
| 29.2 | 9.97 | 226.3 | 25.1 | 15.45 | 3.35 | 2.95 |
| 31.0 | 9.54 | 222.9 | 25.1 | 15.67 | 3.07 | 2.99 |
| 33.1 | 9.04 | 220.5 | 25.0 | 15.50 | 2.87 | 3.18 |
| 34.9 | 8.63 | 221.4 | 25.1 | 15.69 | 2.49 | 3.04 |
| 36.9 | 8.15 | 226.3 | 25.0 | 15.39 | 2.45 | 3.36 |
| 39.0 | 7.70 | 227.4 | 25.1 | 15.34 | 2.57 | 3.39 |
| 41.0 | 7.26 | 227.5 | 24.7 | 15.49 | 2.76 | 3.05 |
| 43.1 | 6.81 | 226.0 | 24.4 | 15.65 | 2.70 | 2.85 |
| 45.4 | 6.32 | 226.6 | 23.5 | 15.90 | 2.58 | 2.31 |
| 47.4 | 5.88 | 227.1 | 23.2 | 16.21 | 2.45 | 2.08 |
| 49.8 | 5.41 | 225.2 | 23.9 | 16.34 | 2.69 | 1.72 |
| 51.8 | 4.99 | 222.9 | 24.1 | 15.94 | 2.36 | 2.15 |
| 54.4 | 4.54 | 220.8 | 23.7 | 16.01 | 1.96 | 2.22 |
| 56.9 | 4.09 | 217.6 | 23.4 | 15.90 | 1.52 | 2.20 |
| 60.0 | 3.63 | 215.3 | 23.5 | 15.23 | .51 | 3.12 |
| 63.5 | 3.18 | 212.1 | 23.0 | 14.75 | .27 | 3.84 |
| 68.4 | 2.71 | 208.4 | 24.2 | 13.58 | .13 | 5.08 |
| 73.8 | 2.27 | 198.5 | 24.3 | 12.75 | .06 | 6.02 |
| 80.4 | 1.81 | 187.5 | 23.1 | 11.22 | .14 | 7.71 |
| 90.5 | 1.35 | 169.4 | 24.4 | 10.60 | .07 | 8.16 |
| 101.3 | .89 | 169.4 | 24.5 | 10.81 | .12 | 8.64 |
| 113.8 | .44 | 151.7 | 23.0 | 7.90 | .30 | 11.81 |

RESULTATS (AVEC HC<0 CONSERVE)

TITRE: FULL POWER-2-3
FICHIER: 241010

| TEMPS MIN. | P.INI KG | P.FIN KG | INPUT MJ | OUTPUT MJ | CO gr | HC gr |
|---|---|---|---|---|---|---|
| 2.2 | 15.47 | 14.99 | 5.88 | 1.47 | 47 | 27 |
| 4.0 | 14.99 | 14.67 | 4.16 | 1.03 | 82 | 49 |
| 5.7 | 14.67 | 14.35 | 4.23 | 1.09 | 120 | 73 |
| 7.3 | 14.35 | 14.04 | 4.22 | 1.08 | 159 | 98 |
| 8.8 | 14.04 | 13.70 | 4.58 | 1.27 | 200 | 126 |
| 10.3 | 13.70 | 13.35 | 4.97 | 1.33 | 245 | 159 |
| 11.9 | 13.35 | 13.01 | 4.80 | 1.34 | 288 | 190 |
| 13.1 | 13.01 | 12.68 | 4.88 | 1.36 | 331 | 224 |
| 14.7 | 12.68 | 12.32 | 5.32 | 1.68 | 378 | 258 |
| 16.2 | 12.32 | 11.96 | 5.38 | 1.70 | 426 | 292 |
| 17.7 | 11.96 | 11.60 | 5.51 | 1.83 | 474 | 327 |
| 19.2 | 11.60 | 11.23 | 5.66 | 1.83 | 524 | 366 |
| 20.8 | 11.23 | 10.87 | 5.65 | 2.17 | 571 | 399 |
| 22.3 | 10.87 | 10.48 | 6.16 | 2.49 | 622 | 433 |
| 24.1 | 10.48 | 10.09 | 6.23 | 2.62 | 673 | 466 |
| 25.6 | 10.09 | 9.72 | 6.07 | 2.69 | 729 | 496 |
| 27.4 | 9.72 | 9.33 | 6.42 | 3.07 | 787 | 523 |
| 29.2 | 9.33 | 8.95 | 6.32 | 3.25 | 842 | 547 |
| 31.0 | 8.95 | 8.55 | 6.80 | 3.65 | 897 | 571 |
| 33.1 | 8.55 | 8.15 | 6.83 | 3.94 | 950 | 591 |
| 34.9 | 8.15 | 7.76 | 6.89 | 4.31 | 998 | 606 |
| 36.9 | 7.76 | 7.35 | 7.38 | 4.80 | 1050 | 618 |
| 39.0 | 7.35 | 6.95 | 7.27 | 4.84 | 1104 | 629 |
| 41.0 | 6.95 | 6.55 | 7.49 | 5.18 | 1164 | 636 |
| 43.1 | 6.55 | 6.13 | 8.16 | 5.92 | 1229 | 640 |
| 45.4 | 6.13 | 5.71 | 8.32 | 6.57 | 1294 | 633 |
| 47.4 | 5.71 | 5.30 | 8.38 | 6.84 | 1357 | 624 |
| 49.8 | 5.30 | 4.89 | 8.54 | 7.16 | 1427 | 611 |
| 51.8 | 4.89 | 4.49 | 8.76 | 7.76 | 1494 | 591 |
| 54.4 | 4.49 | 4.07 | 9.41 | 8.78 | 1557 | 563 |
| 56.9 | 4.07 | 3.65 | 9.80 | 10.00 | 1612 | 519 |
| 60.0 | 3.65 | 3.23 | 10.23 | 11.86 | 1635 | 451 |
| 63.5 | 3.23 | 2.80 | 10.92 | 12.89 | 1649 | 376 |
| 68.4 | 2.80 | 2.37 | 11.37 | 14.07 | 1657 | 285 |
| 73.8 | 2.37 | 1.94 | 11.78 | 14.98 | 1661 | 185 |
| 80.4 | 1.94 | 1.51 | 12.62 | 16.12 | 1673 | 74 |
| 90.5 | 1.51 | 1.07 | 13.24 | 18.61 | 1680 | -73 |
| 101.3 | 1.07 | .64 | 14.00 | 16.43 | 1692 | -159 |
| 113.8 | .64 | 0.00 | 21.49 | 24.24 | 1751 | -285 |

RESULTATS (AVEC HC<0 CONSERVE)

FICHIER: 241010 FULL POWER-2-3
NOMBRE DE POINTS DE MESURE= 39

MESURES DE CHEMINEE (100% CHARGE BRULEE)

POIDS SEC= 15.5 KG
DUREE =125 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
1751 grammes
7.2 g/MJ
840 g/Hre
HYDROCARBURES :
-285 grammes
-1.2 g/MJ
-137 g/Hre

INPUT : 306 MJ

OUTPUT : 242 MJ

PUISSANCE:116 MJ/Hre

RENDEMENT:79.1 %

MESURES DE CHEMINEE (90.3% CHARGE BRULEE)

POIDS SEC= 14.0 KG
DUREE = 85 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
1673 grammes
9.1 g/MJ
1175 g/Hre
HYDROCARBURES :
74 grammes
.4 g/MJ
52 g/Hre

INPUT : 257 MJ

OUTPUT : 183 MJ

PUISSANCE:128 MJ/Hre

RENDEMENT:71.1 %

MESURES AU PLENUM

| | | |
|---|---|---|
| FRACTION BRULEE | 95.9 % | 90.3 % |
| DUREE | 108 MIN | 85 MIN |
| DELTA T MOYEN | -80 C | -80 C |
| INPUT | 285 MJ | 257 MJ |
| OUTPUT | -357 MJ | -283 MJ |
| PUISSANCE: | MJ/H | MJ/H |
| RENDEMENT | -125 % | -110 % |

RESULTATS (AVEC HC<0 ELIMINE)

TITRE: FULL POWER-2-3
FICHIER: 241010

| TEMPS MIN. | P.INI KG | P.FIN KG | INPUT MJ | OUTPUT MJ | CO gr | HC gr |
|---|---|---|---|---|---|---|
| 2.2 | 15.47 | 14.99 | 5.88 | 1.47 | 47 | 27 |
| 4.0 | 14.99 | 14.67 | 4.16 | 1.03 | 82 | 49 |
| 5.7 | 14.67 | 14.35 | 4.23 | 1.09 | 120 | 73 |
| 7.3 | 14.35 | 14.04 | 4.22 | 1.08 | 159 | 98 |
| 8.8 | 14.04 | 13.70 | 4.58 | 1.27 | 200 | 126 |
| 10.3 | 13.70 | 13.35 | 4.97 | 1.33 | 245 | 159 |
| 11.9 | 13.35 | 13.01 | 4.80 | 1.34 | 288 | 190 |
| 13.1 | 13.01 | 12.68 | 4.88 | 1.36 | 331 | 224 |
| 14.7 | 12.68 | 12.32 | 5.32 | 1.68 | 378 | 258 |
| 16.2 | 12.32 | 11.96 | 5.38 | 1.70 | 426 | 292 |
| 17.7 | 11.96 | 11.60 | 5.51 | 1.83 | 474 | 327 |
| 19.2 | 11.60 | 11.23 | 5.66 | 1.83 | 524 | 366 |
| 20.8 | 11.23 | 10.87 | 5.65 | 2.17 | 571 | 399 |
| 22.3 | 10.87 | 10.48 | 6.16 | 2.49 | 622 | 433 |
| 24.1 | 10.48 | 10.09 | 6.23 | 2.62 | 673 | 466 |
| 25.6 | 10.09 | 9.72 | 6.07 | 2.69 | 729 | 496 |
| 27.4 | 9.72 | 9.33 | 6.42 | 3.07 | 787 | 523 |
| 29.2 | 9.33 | 8.95 | 6.32 | 3.25 | 842 | 547 |
| 31.0 | 8.95 | 8.55 | 6.80 | 3.65 | 897 | 571 |
| 33.1 | 8.55 | 8.15 | 6.83 | 3.94 | 950 | 591 |
| 34.9 | 8.15 | 7.76 | 6.89 | 4.31 | 998 | 606 |
| 36.9 | 7.76 | 7.35 | 7.38 | 4.80 | 1050 | 618 |
| 39.0 | 7.35 | 6.95 | 7.27 | 4.84 | 1104 | 629 |
| 41.0 | 6.95 | 6.55 | 7.49 | 5.18 | 1164 | 636 |
| 43.1 | 6.55 | 6.13 | 8.16 | 5.92 | 1229 | 640 |
| 45.4 | 6.13 | 5.71 | 8.32 | 6.22 | 1294 | 640 |
| 47.4 | 5.71 | 5.30 | 8.38 | 6.33 | 1357 | 640 |
| 49.8 | 5.30 | 4.89 | 8.54 | 6.44 | 1427 | 640 |
| 51.8 | 4.89 | 4.49 | 8.76 | 6.62 | 1494 | 640 |
| 54.4 | 4.49 | 4.07 | 9.41 | 7.22 | 1557 | 640 |
| 56.9 | 4.07 | 3.65 | 9.80 | 7.55 | 1612 | 640 |
| 60.0 | 3.65 | 3.23 | 10.23 | 8.01 | 1635 | 640 |
| 63.5 | 3.23 | 2.80 | 10.92 | 8.69 | 1649 | 640 |
| 68.4 | 2.80 | 2.37 | 11.37 | 8.99 | 1657 | 640 |
| 73.8 | 2.37 | 1.94 | 11.78 | 9.36 | 1661 | 640 |
| 80.4 | 1.94 | 1.51 | 12.62 | 9.91 | 1673 | 640 |
| 90.5 | 1.51 | 1.07 | 13.24 | 10.35 | 1680 | 640 |
| 101.3 | 1.07 | .64 | 14.00 | 11.63 | 1692 | 640 |
| 113.8 | .64 | 0.00 | 21.49 | 17.20 | 1751 | 640 |

RESULTATS (AVEC HC<0 ELIMINE)

FICHIER: 241010 FULL POWER-2-3
NOMBRE DE POINTS DE MESURE= 39

MESURES DE CHEMINEE (100% CHARGE BRULEE)

POIDS SEC= 15.5 KG
DUREE =125 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
1751 grammes
9.2 g/MJ
840 g/Hre

HYDROCARBURES :
640 grammes
3.4 g/MJ
307 g/Hre

INPUT : 306 MJ

OUTPUT : 190 MJ

PUISSANCE: 91 MJ/Hre

RENDEMENT:62.2 %

MESURES DE CHEMINEE (90.3% CHARGE BRULEE)

POIDS SEC= 14.0 KG
DUREE = 85 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
1673 grammes
11.1 g/MJ
1175 g/Hre

HYDROCARBURES :
640 grammes
4.2 g/MJ
449 g/Hre

INPUT : 257 MJ

OUTPUT : 151 MJ

PUISSANCE:106 MJ/Hre

RENDEMENT:58.8 %

MESURES AU PLENUM

| | | |
|---|---|---|
| FRACTION BRULEE | 95.9 % | 90.3 % |
| DUREE | 108 MIN | 85 MIN |
| DELTA T MOYEN | -80 C | -80 C |
| INPUT | 285 MJ | 257 MJ |
| OUTPUT | -357 MJ | -283 MJ |
| PUISSANCE: | MJ/H | MJ/H |
| RENDEMENT | -125 % | -110 % |

# MESURES

FICHIER: 241013
TITRE: FULL POWER-3-3
POIDS INITIAL (BASE HUMIDE)=18.47KG
HUMIDITE DU BOIS=15%
POIDS INTIAL (BASE SECHE)15.70KG
INTERVALLE DE LECTURE [%] 2.5
NBRE. DE LECTURES AU CHANGEMENT D'ETAT 1

| TEMPS MIN. | POIDS KG | T.CH. C | T.AMB C | CO2 % | CO % | C2 % |
|---|---|---|---|---|---|---|
| 1.9 | 17.98 | 123.6 | 23.1 | 13.37 | 3.51 | 5.97 |
| 3.5 | 17.46 | 146.7 | 22.5 | 14.99 | 4.27 | 3.54 |
| 4.7 | 17.00 | 166.3 | 22.4 | 15.55 | 5.26 | 2.71 |
| 5.7 | 16.58 | 179.5 | 22.1 | 15.93 | 6.57 | 2.10 |
| 6.8 | 16.14 | 188.1 | 22.4 | 16.09 | 7.11 | 1.66 |
| 7.8 | 15.70 | 192.1 | 22.5 | 16.18 | 7.11 | 1.53 |
| 9.1 | 15.12 | 195.2 | 23.2 | 16.26 | 7.13 | 1.47 |
| 10.1 | 14.66 | 197.0 | 23.7 | 16.28 | 7.06 | 1.44 |
| 11.1 | 14.21 | 199.2 | 23.0 | 16.35 | 7.19 | 1.36 |
| 12.2 | 13.80 | 200.8 | 22.4 | 16.30 | 7.22 | 1.37 |
| 13.2 | 13.36 | 202.5 | 22.1 | 16.27 | 7.33 | 1.32 |
| 14.2 | 12.91 | 203.3 | 21.9 | 16.13 | 7.60 | 1.34 |
| 15.5 | 12.36 | 203.3 | 22.2 | 16.30 | 7.14 | 1.36 |
| 16.5 | 11.98 | 203.9 | 22.3 | 16.27 | 7.13 | 1.33 |
| 17.8 | 11.48 | 205.8 | 22.0 | 16.20 | 6.81 | 1.37 |
| 18.8 | 11.08 | 206.0 | 22.1 | 16.23 | 6.90 | 1.36 |
| 20.4 | 10.56 | 206.7 | 21.8 | 16.15 | 6.81 | 1.38 |
| 21.6 | 10.11 | 206.9 | 21.2 | 15.98 | 6.49 | 1.37 |
| 22.9 | 9.69 | 205.6 | 21.3 | 15.77 | 6.69 | 1.41 |
| 24.5 | 9.23 | 202.6 | 21.7 | 15.94 | 6.25 | 1.41 |
| 26.0 | 8.77 | 201.3 | 21.6 | 15.92 | 6.21 | 1.35 |
| 27.8 | 8.26 | 199.7 | 21.2 | 15.93 | 6.05 | 1.40 |
| 29.4 | 7.84 | 198.0 | 21.3 | 16.03 | 5.58 | 1.44 |
| 31.4 | 7.31 | 198.2 | 21.3 | 16.06 | 5.00 | 1.50 |
| 33.2 | 6.88 | 204.0 | 21.4 | 16.27 | 4.58 | 1.44 |
| 35.0 | 6.43 | 206.7 | 21.4 | 16.45 | 4.03 | 1.38 |
| 37.1 | 5.99 | 206.6 | 21.2 | 16.34 | 4.07 | 1.49 |
| 39.4 | 5.47 | 213.2 | 21.6 | 16.11 | 4.30 | 1.51 |
| 41.4 | 5.04 | 215.4 | 21.4 | 16.14 | 4.02 | 1.56 |
| 43.5 | 4.61 | 217.0 | 21.7 | 16.12 | 3.87 | 1.54 |
| 45.8 | 4.15 | 219.6 | 21.7 | 16.25 | 3.37 | 1.52 |
| 48.6 | 3.65 | 223.4 | 21.8 | 16.24 | 2.92 | 1.59 |
| 51.2 | 3.21 | 226.3 | 21.7 | 16.30 | 2.46 | 1.67 |
| 54.3 | 2.75 | 228.6 | 21.7 | 16.36 | .97 | 1.96 |
| 57.9 | 2.28 | 227.1 | 22.0 | 14.71 | .12 | 4.08 |
| 62.6 | 1.83 | 210.5 | 21.9 | 14.58 | .05 | 4.45 |
| 68.8 | 1.37 | 196.9 | 21.7 | 12.69 | .06 | 6.22 |
| 78.0 | .91 | 185.5 | 21.8 | 12.27 | .10 | 7.29 |
| 88.9 | .46 | 166.9 | 21.5 | 9.66 | .15 | 10.12 |

RESULTATS (AVEC HC<0 CONSERVE)

TITRE: FULL POWER-3-3
FICHIER: 241013

| TEMPS MIN. | P.INI KG | P.FIN KG | INPUT MJ | OUTPUT MJ | CO gr | HC gr |
|---|---|---|---|---|---|---|
| 1.9 | 15.70 | 15.20 | 6.28 | 1.29 | 61 | 34 |
| 3.5 | 15.20 | 14.86 | 4.38 | 1.06 | 107 | 57 |
| 4.7 | 14.86 | 14.55 | 4.09 | .86 | 155 | 82 |
| 5.7 | 14.55 | 14.24 | 4.14 | .70 | 210 | 112 |
| 6.8 | 14.24 | 13.92 | 4.42 | .74 | 270 | 145 |
| 7.8 | 13.92 | 13.54 | 5.30 | .95 | 342 | 186 |
| 9.1 | 13.54 | 13.15 | 5.60 | 1.06 | 418 | 230 |
| 10.1 | 13.15 | 12.80 | 5.12 | 1.04 | 486 | 270 |
| 11.1 | 12.80 | 12.46 | 4.97 | 1.04 | 553 | 309 |
| 12.2 | 12.46 | 12.13 | 4.99 | 1.10 | 620 | 349 |
| 13.2 | 12.13 | 11.78 | 5.35 | 1.24 | 693 | 390 |
| 14.2 | 11.78 | 11.38 | 6.21 | 1.49 | 780 | 438 |
| 15.5 | 11.38 | 11.00 | 5.95 | 1.61 | 860 | 483 |
| 16.5 | 11.00 | 10.63 | 5.73 | 1.65 | 937 | 524 |
| 17.8 | 10.63 | 10.26 | 6.03 | 1.95 | 1017 | 564 |
| 18.8 | 10.26 | 9.87 | 6.32 | 2.12 | 1102 | 605 |
| 20.4 | 9.87 | 9.46 | 6.77 | 2.48 | 1192 | 646 |
| 21.6 | 9.46 | 9.09 | 6.20 | 2.55 | 1276 | 678 |
| 22.9 | 9.09 | 8.70 | 6.50 | 2.81 | 1367 | 709 |
| 24.5 | 8.70 | 8.30 | 6.93 | 3.25 | 1459 | 739 |
| 26.0 | 8.30 | 7.88 | 7.46 | 3.73 | 1560 | 767 |
| 27.8 | 7.88 | 7.47 | 7.38 | 3.92 | 1660 | 791 |
| 29.4 | 7.47 | 7.05 | 7.71 | 4.40 | 1759 | 812 |
| 31.4 | 7.05 | 6.62 | 8.10 | 5.07 | 1858 | 827 |
| 33.2 | 6.62 | 6.22 | 7.67 | 5.08 | 1946 | 837 |
| 35.0 | 6.22 | 5.81 | 8.02 | 5.72 | 2031 | 841 |
| 37.1 | 5.81 | 5.37 | 8.91 | 6.50 | 2128 | 843 |
| 39.4 | 5.37 | 4.94 | 9.14 | 6.83 | 2235 | 842 |
| 41.4 | 4.94 | 4.55 | 8.57 | 6.68 | 2332 | 836 |
| 43.5 | 4.55 | 4.13 | 9.26 | 7.48 | 2436 | 826 |
| 45.8 | 4.13 | 3.69 | 10.38 | 8.86 | 2543 | 807 |
| 48.6 | 3.69 | 3.25 | 10.67 | 9.64 | 2643 | 780 |
| 51.2 | 3.25 | 2.83 | 10.70 | 10.11 | 2733 | 746 |
| 54.3 | 2.83 | 2.39 | 11.58 | 12.63 | 2777 | 684 |
| 57.9 | 2.39 | 1.96 | 12.08 | 14.31 | 2784 | 602 |
| 62.6 | 1.96 | 1.53 | 12.41 | 14.49 | 2787 | 527 |
| 68.8 | 1.53 | 1.09 | 13.26 | 16.61 | 2791 | 422 |
| 78.0 | 1.09 | .66 | 13.98 | 15.50 | 2800 | 356 |
| 88.9 | .66 | 0.00 | 22.17 | 24.30 | 2824 | 252 |

RESULTATS (AVEC MC<0 CONSERVE)

FICHIER: 241013 FULL POWER-3-3
NOMBRE DE POINTS DE MESURE= 39

MESURES DE CHEMINEE (100% CHARGE BRULEE)

POIDS SEC= 15.7 KG
DUREE =105 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
2824 grammes
13.3 g/MJ
1614 g/Hre
HYDROCARBURES :
252 grammes
1.2 g/MJ
144 g/Hre

INPUT : 311 MJ

OUTPUT : 213 MJ

PUISSANCE:122 MJ/Hre

RENDEMENT:68.5 %

MESURES DE CHEMINEE (90.3% CHARGE BRULEE)

POIDS SEC= 14.2 KG
DUREE = 66 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
2787 grammes
17.8 g/MJ
2545 g/Hre
HYDROCARBURES :
527 grammes
3.4 g/MJ
481 g/Hre

INPUT : 261 MJ

OUTPUT : 156 MJ

PUISSANCE:143 MJ/Hre

RENDEMENT:59.9 %

MESURES AU PLENUM

| | | |
|---|---|---|
| FRACTION BRULEE | 95.8 % | 90.3 % |
| DUREE | 83 MIN | 66 MIN |
| DELTA T MOYEN | -80 C | -80 C |
| INPUT | 289 MJ | 261 MJ |
| OUTPUT | -278 MJ | -218 MJ |
| PUISSANCE: | MJ/H | MJ/H |
| RENDEMENT | -96 % | -83 % |

RESULTATS (AVEC HC<0 ELIMINE)

TITRE: FULL POWER-3-3
FICHIER: 241013

| TEMPS MIN. | P.INI KG | P.FIN KG | INPUT MJ | OUTPUT MJ | CO gr | HC gr |
|---|---|---|---|---|---|---|
| 1.9 | 15.70 | 15.20 | 6.28 | 1.29 | 61 | 34 |
| 3.5 | 15.20 | 14.86 | 4.38 | 1.06 | 107 | 57 |
| 4.7 | 14.86 | 14.55 | 4.09 | .86 | 155 | 82 |
| 5.7 | 14.55 | 14.24 | 4.14 | .70 | 210 | 112 |
| 6.8 | 14.24 | 13.92 | 4.42 | .74 | 270 | 145 |
| 7.8 | 13.92 | 13.54 | 5.30 | .95 | 342 | 186 |
| 9.1 | 13.54 | 13.15 | 5.60 | 1.06 | 418 | 230 |
| 10.1 | 13.15 | 12.80 | 5.12 | 1.04 | 486 | 270 |
| 11.1 | 12.80 | 12.46 | 4.97 | 1.04 | 553 | 309 |
| 12.2 | 12.46 | 12.13 | 4.99 | 1.10 | 620 | 349 |
| 13.2 | 12.13 | 11.78 | 5.35 | 1.24 | 693 | 390 |
| 14.2 | 11.78 | 11.38 | 6.21 | 1.49 | 780 | 438 |
| 15.5 | 11.38 | 11.00 | 5.95 | 1.61 | 860 | 483 |
| 16.5 | 11.00 | 10.63 | 5.73 | 1.65 | 937 | 524 |
| 17.8 | 10.63 | 10.26 | 6.03 | 1.95 | 1017 | 564 |
| 18.8 | 10.26 | 9.87 | 6.32 | 2.12 | 1102 | 605 |
| 20.4 | 9.87 | 9.46 | 6.77 | 2.48 | 1192 | 646 |
| 21.6 | 9.46 | 9.09 | 6.20 | 2.55 | 1276 | 678 |
| 22.9 | 9.09 | 8.70 | 6.50 | 2.81 | 1367 | 709 |
| 24.5 | 8.70 | 8.30 | 6.93 | 3.25 | 1459 | 739 |
| 26.0 | 8.30 | 7.88 | 7.46 | 3.73 | 1560 | 767 |
| 27.8 | 7.88 | 7.47 | 7.38 | 3.92 | 1660 | 791 |
| 29.4 | 7.47 | 7.05 | 7.71 | 4.40 | 1759 | 812 |
| 31.4 | 7.05 | 6.62 | 8.10 | 5.07 | 1858 | 827 |
| 33.2 | 6.62 | 6.22 | 7.67 | 5.08 | 1946 | 837 |
| 35.0 | 6.22 | 5.81 | 8.02 | 5.72 | 2031 | 841 |
| 37.1 | 5.81 | 5.37 | 8.91 | 6.50 | 2128 | 843 |
| 39.4 | 5.37 | 4.94 | 9.14 | 6.74 | 2235 | 843 |
| 41.4 | 4.94 | 4.55 | 8.57 | 6.37 | 2332 | 843 |
| 43.5 | 4.55 | 4.13 | 9.26 | 6.89 | 2436 | 843 |
| 45.8 | 4.13 | 3.69 | 10.38 | 7.82 | 2543 | 843 |
| 48.6 | 3.69 | 3.25 | 10.67 | 8.10 | 2643 | 843 |
| 51.2 | 3.25 | 2.83 | 10.70 | 8.22 | 2733 | 843 |
| 54.3 | 2.83 | 2.39 | 11.58 | 9.17 | 2777 | 843 |
| 57.9 | 2.39 | 1.96 | 12.08 | 9.71 | 2784 | 843 |
| 62.6 | 1.96 | 1.53 | 12.41 | 10.27 | 2787 | 843 |
| 68.8 | 1.53 | 1.09 | 13.26 | 10.72 | 2791 | 843 |
| 78.0 | 1.09 | .66 | 13.98 | 11.80 | 2800 | 843 |
| 88.9 | .66 | 0.00 | 22.17 | 18.46 | 2824 | 843 |

RESULTATS (AVEC HC<0 ELIMINE)

FICHIER: 241013 FULL POWER-3-3
NOMBRE DE POINTS DE MESURE= 39

MESURES DE CHEMINEE (100% CHARGE BRULEE)

POIDS SEC= 15.7 KG
DUREE =105 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
2824 grammes
15.7 g/MJ
1614 g/Hre
HYDROCARBURES :
843 grammes
4.7 g/MJ
482 g/Hre

INPUT : 311 MJ

OUTPUT : 180 MJ

PUISSANCE:103 MJ/Hre

RENDEMENT:57.8 %

MESURES DE CHEMINEE (90.3% CHARGE BRULEE)

POIDS SEC= 14.2 KG
DUREE = 66 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
2787 grammes
20.1 g/MJ
2545 g/Hre
HYDROCARBURES :
843 grammes
6.1 g/MJ
770 g/Hre

INPUT : 261 MJ

OUTPUT : 139 MJ

PUISSANCE:127 MJ/Hre

RENDEMENT:53.1 %

MESURES AU PLENUM

| | | |
|---|---|---|
| FRACTION BRULEE | 95.8 % | 90.3 % |
| DUREE | 83 MIN | 66 MIN |
| DELTA T MOYEN | -80 C | -80 C |
| INPUT | 289 MJ | 261 MJ |
| OUTPUT | -278 MJ | -218 MJ |
| PUISSANCE: | MJ/H | MJ/H |
| RENDEMENT | -96 % | -83 % |

# MESURES

FICHIER: 281015
TITRE: FULL POWER 4-3
POIDS INITIAL (BASE HUMIDE)=17.09KG
HUMIDITE DU BOIS=15%
POIDS INTIAL (BASE SECHE)14.53KG
INTERVALLE DE LECTURE [%] 2.5
NBRE. DE LECTURES AU CHANGEMENT D'ETAT 1

| TEMPS MIN. | POIDS KG | T.CH. C | T.AMB C | CO2 % | CO % | O2 % |
|---|---|---|---|---|---|---|
| 1.7 | 16.52 | 192.3 | 24.3 | 16.38 | 5.37 | 2.57 |
| 2.9 | 16.07 | 195.8 | 24.2 | 16.41 | 6.40 | 2.53 |
| 4.2 | 15.62 | 202.6 | 24.3 | 16.52 | 5.64 | 2.35 |
| 5.4 | 15.19 | 208.3 | 24.3 | 16.69 | 5.35 | 2.26 |
| 6.7 | 14.75 | 214.3 | 24.2 | 16.65 | 4.53 | 2.27 |
| 7.9 | 14.34 | 219.3 | 24.4 | 16.60 | 4.17 | 2.39 |
| 9.2 | 13.94 | 224.9 | 24.5 | 16.54 | 4.40 | 2.37 |
| 10.4 | 13.56 | 229.2 | 24.5 | 16.54 | 4.56 | 2.29 |
| 11.7 | 13.16 | 232.2 | 24.5 | 16.59 | 4.70 | 2.10 |
| 12.9 | 12.73 | 235.1 | 22.6 | 16.61 | 4.59 | 2.08 |
| 14.2 | 12.35 | 236.7 | 23.4 | 16.62 | 4.20 | 2.07 |
| 16.1 | 11.79 | 238.1 | 24.1 | 16.41 | 3.95 | 2.28 |
| 17.3 | 11.43 | 238.5 | 24.2 | 16.31 | 3.86 | 2.30 |
| 18.6 | 11.10 | 237.4 | 24.4 | 16.44 | 3.73 | 2.25 |
| 20.5 | 10.55 | 234.8 | 24.4 | 16.40 | 3.49 | 2.25 |
| 21.7 | 10.24 | 233.0 | 24.4 | 16.54 | 3.47 | 2.14 |
| 23.6 | 9.73 | 227.8 | 24.5 | 16.42 | 3.74 | 2.13 |
| 25.5 | 9.26 | 222.1 | 24.5 | 16.22 | 2.96 | 2.25 |
| 26.8 | 8.95 | 219.5 | 24.4 | 16.17 | 2.88 | 2.31 |
| 28.7 | 8.51 | 217.4 | 24.6 | 15.85 | 2.42 | 2.61 |
| 30.6 | 8.09 | 213.4 | 24.5 | 15.47 | 2.54 | 2.91 |
| 33.1 | 7.60 | 213.2 | 24.4 | 14.84 | 2.09 | 3.79 |
| 35.0 | 7.26 | 214.0 | 24.6 | 14.75 | 1.96 | 3.98 |
| 37.5 | 6.80 | 216.8 | 24.7 | 14.44 | 1.63 | 4.44 |
| 40.1 | 6.37 | 219.0 | 24.4 | 14.49 | 1.44 | 4.36 |
| 42.6 | 5.97 | 219.0 | 24.6 | 14.30 | 1.33 | 4.65 |
| 45.1 | 5.55 | 218.3 | 24.6 | 14.09 | 1.33 | 4.90 |
| 48.3 | 5.09 | 218.3 | 24.8 | 13.85 | 1.21 | 5.22 |
| 51.4 | 4.66 | 217.5 | 24.8 | 13.31 | 1.00 | 5.79 |
| 54.6 | 4.24 | 215.9 | 24.8 | 12.62 | 1.08 | 6.45 |
| 58.3 | 3.77 | 211.1 | 24.8 | 12.86 | 1.16 | 6.06 |
| 61.7 | 3.29 | 211.1 | 24.8 | 13.20 | 1.00 | 5.47 |
| 64.2 | 2.97 | 213.4 | 24.9 | 13.29 | 1.03 | 5.34 |
| 67.4 | 2.55 | 212.9 | 24.8 | 12.79 | .80 | 6.11 |
| 71.8 | 2.10 | 202.9 | 24.7 | 12.30 | .24 | 6.83 |
| 76.8 | 1.68 | 193.7 | 24.7 | 11.41 | .18 | 7.62 |
| 83.1 | 1.27 | 183.5 | 24.7 | 9.75 | .18 | 9.79 |
| 92.5 | .84 | 166.5 | 24.7 | 8.90 | .17 | 10.93 |
| 105.0 | .38 | 153.7 | 24.7 | 8.47 | .13 | 11.47 |

RESULTATS (AVEC HC<0 CONSERVE)

TITRE: FULL POWER 4-3
FICHIER: 281015

| TEMPS MIN. | P.INI KG | P.FIN KG | INPUT MJ | OUTPUT MJ | CO gr | HC gr |
|---|---|---|---|---|---|---|
| 1.7 | 14.53 | 13.99 | 6.75 | .87 | 75 | 43 |
| 2.9 | 13.99 | 13.68 | 4.02 | .41 | 124 | 74 |
| 4.2 | 13.68 | 13.37 | 4.14 | .62 | 171 | 105 |
| 5.4 | 13.37 | 13.05 | 4.27 | .72 | 217 | 137 |
| 6.7 | 13.05 | 12.74 | 4.33 | .95 | 259 | 168 |
| 7.9 | 12.74 | 12.44 | 4.24 | 1.02 | 298 | 198 |
| 9.2 | 12.44 | 12.15 | 4.21 | 1.02 | 338 | 229 |
| 10.4 | 12.15 | 11.85 | 4.40 | 1.08 | 380 | 262 |
| 11.7 | 11.85 | 11.52 | 4.81 | 1.24 | 428 | 297 |
| 12.9 | 11.52 | 11.20 | 4.78 | 1.31 | 475 | 332 |
| 14.2 | 11.20 | 10.83 | 5.70 | 1.76 | 528 | 370 |
| 16.1 | 10.83 | 10.46 | 5.76 | 1.97 | 579 | 407 |
| 17.3 | 10.46 | 10.18 | 4.38 | 1.60 | 618 | 433 |
| 18.6 | 10.18 | 9.82 | 5.70 | 2.18 | 667 | 467 |
| 20.5 | 9.82 | 9.46 | 5.77 | 2.46 | 715 | 497 |
| 21.7 | 9.46 | 9.11 | 5.67 | 2.50 | 761 | 526 |
| 23.6 | 9.11 | 8.69 | 6.92 | 3.19 | 822 | 558 |
| 25.5 | 8.69 | 8.35 | 5.61 | 3.07 | 865 | 577 |
| 26.8 | 8.35 | 8.03 | 5.50 | 3.15 | 907 | 593 |
| 28.7 | 8.03 | 7.66 | 6.45 | 4.10 | 951 | 606 |
| 30.6 | 7.66 | 7.26 | 7.04 | 4.64 | 1003 | 616 |
| 33.1 | 7.26 | 6.89 | 6.64 | 4.67 | 1047 | 621 |
| 35.0 | 6.89 | 6.54 | 6.47 | 4.69 | 1088 | 624 |
| 37.5 | 6.54 | 6.14 | 7.42 | 5.69 | 1129 | 623 |
| 40.1 | 6.14 | 5.76 | 7.22 | 5.89 | 1166 | 615 |
| 42.6 | 5.76 | 5.39 | 7.37 | 6.18 | 1202 | 605 |
| 45.1 | 5.39 | 4.99 | 8.17 | 6.99 | 1242 | 592 |
| 48.3 | 4.99 | 4.58 | 8.57 | 7.56 | 1283 | 575 |
| 51.4 | 4.58 | 4.19 | 8.44 | 7.84 | 1319 | 552 |
| 54.6 | 4.19 | 3.78 | 9.26 | 8.73 | 1364 | 522 |
| 58.3 | 3.78 | 3.34 | 10.38 | 10.12 | 1418 | 484 |
| 61.7 | 3.34 | 2.97 | 9.14 | 9.65 | 1461 | 437 |
| 64.2 | 2.97 | 2.62 | 8.76 | 9.32 | 1503 | 392 |
| 67.4 | 2.62 | 2.21 | 10.85 | 11.60 | 1547 | 336 |
| 71.8 | 2.21 | 1.80 | 11.40 | 13.18 | 1562 | 263 |
| 76.8 | 1.80 | 1.41 | 11.37 | 13.99 | 1575 | 174 |
| 83.1 | 1.41 | 1.01 | 12.18 | 13.94 | 1591 | 99 |
| 92.5 | 1.01 | .59 | 13.62 | 14.94 | 1609 | 31 |
| 105.0 | .59 | 0.00 | 19.88 | 21.65 | 1631 | -60 |

RESULTATS (AVEC HC<0 CONSERVE)

FICHIER: 281015 FULL POWER 4-3
NOMBRE DE POINTS DE MESURE= 39

MESURES DE CHEMINEE (100% CHARGE BRULEE)

POIDS SEC= 14.5 KG
DUREE =118 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
1631 grammes
7.5 g/MJ
829 g/Hre

HYDROCARBURES :
-60 grammes
-.3 g/MJ
-31 g/Hre

INPUT : 288 MJ

OUTPUT : 217 MJ

PUISSANCE:110 MJ/Hre

RENDEMENT:75.3 %

MESURES DE CHEMINEE (90.3% CHARGE BRULEE)

POIDS SEC= 13.1 KG
DUREE = 80 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
1575 grammes
9.5 g/MJ
1182 g/Hre

HYDROCARBURES :
174 grammes
1.0 g/MJ
130 g/Hre

INPUT : 242 MJ

OUTPUT : 166 MJ

PUISSANCE:125 MJ/Hre

RENDEMENT:68.6 %

MESURES AU PLENUM

| | | |
|---|---|---|
| FRACTION BRULEE | 96.0 % | 90.3 % |
| DUREE | 99 MIN | 80 MIN |
| DELTA T MOYEN | 37 C | 38 C |
| INPUT | 268 MJ | 242 MJ |
| OUTPUT | 147 MJ | 125 MJ |
| PUISSANCE: | 89 MJ/H | 94 MJ/H |
| RENDEMENT | 55 % | 52 % |

RESULTATS (AVEC HC<0 ELIMINE)

TITRE: FULL POWER 4-3
FICHIER: 281015

| TEMPS MIN. | P.INI KG | P.FIN KG | INPUT MJ | OUTPUT MJ | CO gr | HC gr |
|---|---|---|---|---|---|---|
| 1.7 | 14.53 | 13.99 | 6.75 | .87 | 75 | 43 |
| 2.9 | 13.99 | 13.68 | 4.02 | .41 | 124 | 74 |
| 4.2 | 13.68 | 13.37 | 4.14 | .62 | 171 | 105 |
| 5.4 | 13.37 | 13.05 | 4.27 | .72 | 217 | 137 |
| 6.7 | 13.05 | 12.74 | 4.33 | .95 | 259 | 168 |
| 7.9 | 12.74 | 12.44 | 4.24 | 1.02 | 298 | 198 |
| 9.2 | 12.44 | 12.15 | 4.21 | 1.02 | 338 | 229 |
| 10.4 | 12.15 | 11.85 | 4.40 | 1.08 | 380 | 262 |
| 11.7 | 11.85 | 11.52 | 4.81 | 1.24 | 428 | 297 |
| 12.9 | 11.52 | 11.20 | 4.78 | 1.31 | 475 | 332 |
| 14.2 | 11.20 | 10.83 | 5.70 | 1.76 | 528 | 370 |
| 16.1 | 10.83 | 10.46 | 5.76 | 1.97 | 579 | 407 |
| 17.3 | 10.46 | 10.18 | 4.38 | 1.60 | 618 | 433 |
| 18.6 | 10.18 | 9.82 | 5.70 | 2.18 | 667 | 467 |
| 20.5 | 9.82 | 9.46 | 5.77 | 2.46 | 715 | 497 |
| 21.7 | 9.46 | 9.11 | 5.67 | 2.50 | 761 | 526 |
| 23.6 | 9.11 | 8.69 | 6.92 | 3.19 | 822 | 558 |
| 25.5 | 8.69 | 8.35 | 5.61 | 3.07 | 865 | 577 |
| 26.8 | 8.35 | 8.03 | 5.50 | 3.15 | 907 | 593 |
| 28.7 | 8.03 | 7.66 | 6.45 | 4.10 | 951 | 606 |
| 30.6 | 7.66 | 7.26 | 7.04 | 4.64 | 1003 | 616 |
| 33.1 | 7.26 | 6.89 | 6.64 | 4.67 | 1047 | 621 |
| 35.0 | 6.89 | 6.54 | 6.47 | 4.69 | 1088 | 624 |
| 37.5 | 6.54 | 6.14 | 7.42 | 5.61 | 1129 | 624 |
| 40.1 | 6.14 | 5.76 | 7.22 | 5.48 | 1166 | 624 |
| 42.6 | 5.76 | 5.39 | 7.37 | 5.63 | 1202 | 624 |
| 45.1 | 5.39 | 4.99 | 8.17 | 6.26 | 1242 | 624 |
| 48.3 | 4.99 | 4.58 | 8.57 | 6.60 | 1283 | 624 |
| 51.4 | 4.58 | 4.19 | 8.44 | 6.51 | 1319 | 624 |
| 54.6 | 4.19 | 3.78 | 9.26 | 7.08 | 1364 | 624 |
| 58.3 | 3.78 | 3.34 | 10.38 | 7.98 | 1418 | 624 |
| 61.7 | 3.34 | 2.97 | 9.14 | 7.03 | 1461 | 624 |
| 64.2 | 2.97 | 2.62 | 8.76 | 6.74 | 1503 | 624 |
| 67.4 | 2.62 | 2.21 | 10.85 | 8.46 | 1547 | 624 |
| 71.8 | 2.21 | 1.80 | 11.40 | 9.11 | 1562 | 624 |
| 76.8 | 1.80 | 1.41 | 11.37 | 8.99 | 1575 | 624 |
| 83.1 | 1.41 | 1.01 | 12.18 | 9.73 | 1591 | 624 |
| 92.5 | 1.01 | .59 | 13.62 | 11.14 | 1609 | 624 |
| 105.0 | .59 | 0.00 | 19.88 | 16.57 | 1631 | 624 |

RESULTATS (AVEC HC<0 ELIMINE)

FICHIER: 281015 FULL POWER 4-3
NOMBRE DE POINTS DE MESURE= 39

MESURES DE CHEMINEE (100% CHARGE BRULEE)

POIDS SEC= 14.5 KG
DUREE =118 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
1631 grammes
9.2 g/MJ
829 g/Hre
HYDROCARBURES :
624 grammes
3.5 g/MJ
317 g/Hre

INPUT : 288 MJ

OUTPUT : 178 MJ

PUISSANCE: 91 MJ/Hre

RENDEMENT:61.9 %

MESURES DE CHEMINEE (90.3% CHARGE BRULEE)

POIDS SEC= 13.1 KG
DUREE = 80 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
1575 grammes
11.2 g/MJ
1182 g/Hre
HYDROCARBURES :
624 grammes
4.4 g/MJ
468 g/Hre

INPUT : 242 MJ

OUTPUT : 141 MJ

PUISSANCE:106 MJ/Hre

RENDEMENT:58.2 %

MESURES AU PLENUM

| | | |
|---|---|---|
| FRACTION BRULEE | 96.0 % | 90.3 % |
| DUREE | 99 MIN | 80 MIN |
| DELTA T MOYEN | 37 C | 38 C |
| INPUT | 268 MJ | 242 MJ |
| OUTPUT | 147 MJ | 125 MJ |
| PUISSANCE: | 89 MJ/H | 94 MJ/H |
| RENDEMENT | 55 % | 52 % |

# MESURES

FICHIER: 241016
TITRE: LOW POWER-1-3
POIDS INITIAL (BASE HUMIDE)=17.75KG
HUMIDITE DU BOIS=15%
POIDS INTIAL (BASE SECHE)15.09KG
INTERVALLE DE LECTURE (%) 2.5
NBRE. DE LECTURES AU CHANGEMENT D'ETAT 1

| TEMPS MIN. | POIDS KG | T.CH. C | T.AMB C | CO2 % | CO % | O2 % |
|---|---|---|---|---|---|---|
| 2.4 | 17.26 | 106.0 | 25.2 | 12.62 | 1.52 | 6.63 |
| 4.2 | 16.87 | 137.5 | 25.3 | 14.84 | 3.84 | 3.82 |
| 6.0 | 16.33 | 164.1 | 25.5 | 15.12 | 5.31 | 3.20 |
| 7.3 | 15.90 | 174.9 | 25.6 | 15.93 | 5.95 | 2.39 |
| 8.3 | 15.53 | 181.4 | 25.6 | 16.28 | 6.19 | 2.02 |
| 9.6 | 15.01 | 188.0 | 25.6 | 16.48 | 6.53 | 1.87 |
| 10.6 | 14.62 | 191.5 | 25.6 | 16.70 | 6.60 | 1.66 |
| 11.6 | 14.18 | 194.7 | 25.7 | 16.74 | 6.68 | 1.60 |
| 12.6 | 13.75 | 197.0 | 25.7 | 16.72 | 6.79 | 1.53 |
| 13.9 | 13.20 | 200.2 | 25.8 | 16.82 | 6.62 | 1.44 |
| 14.9 | 12.82 | 202.6 | 25.8 | 16.67 | 6.68 | 1.44 |
| 16.0 | 12.40 | 204.7 | 25.8 | 16.61 | 6.60 | 1.44 |
| 17.2 | 11.91 | 206.8 | 25.9 | 16.57 | 6.79 | 1.43 |
| 18.3 | 11.53 | 207.5 | 25.9 | 16.50 | 6.67 | 1.43 |
| 19.5 | 11.04 | 207.9 | 25.9 | 16.45 | 6.30 | 1.43 |
| 20.8 | 10.57 | 209.4 | 25.9 | 16.45 | 6.09 | 1.46 |
| 22.1 | 10.16 | 212.3 | 26.0 | 16.44 | 6.05 | 1.44 |
| 23.4 | 9.75 | 215.6 | 25.9 | 16.46 | 6.00 | 1.39 |
| 24.6 | 9.30 | 219.6 | 25.9 | 16.43 | 5.77 | 1.39 |
| 26.2 | 8.80 | 222.8 | 26.0 | 16.40 | 5.54 | 1.38 |
| 27.5 | 8.42 | 224.7 | 26.0 | 16.39 | 5.17 | 1.40 |
| 29.0 | 7.97 | 226.1 | 26.0 | 16.03 | 4.80 | 1.48 |
| 30.8 | 7.51 | 226.0 | 26.0 | 16.21 | 3.97 | 1.53 |
| 32.6 | 7.09 | 224.9 | 26.0 | 16.17 | 3.74 | 1.60 |
| 34.7 | 6.65 | 223.3 | 26.1 | 16.13 | 3.47 | 1.69 |
| 37.0 | 6.18 | 222.8 | 26.1 | 16.22 | 2.97 | 1.81 |
| 39.3 | 5.75 | 224.1 | 26.2 | 16.20 | 2.54 | 2.01 |
| 41.6 | 5.31 | 225.4 | 26.1 | 16.17 | 2.34 | 2.02 |
| 44.2 | 4.86 | 218.5 | 26.2 | 16.20 | 2.55 | 1.76 |
| 46.5 | 4.43 | 213.5 | 26.2 | 16.35 | 2.03 | 1.89 |
| 49.3 | 3.98 | 212.2 | 26.3 | 16.41 | 1.63 | 1.86 |
| 52.2 | 3.53 | 210.0 | 26.3 | 16.18 | .98 | 2.41 |
| 55.2 | 3.10 | 209.9 | 26.3 | 15.68 | .54 | 3.05 |
| 59.1 | 2.63 | 210.9 | 26.3 | 14.60 | .28 | 4.14 |
| 63.1 | 2.20 | 213.2 | 26.3 | 14.37 | .28 | 4.34 |
| 67.2 | 1.77 | 208.9 | 26.4 | 13.46 | .21 | 5.19 |
| 73.3 | 1.31 | 188.6 | 26.4 | 10.79 | .21 | 8.19 |
| 82.1 | .87 | 170.5 | 26.5 | 11.58 | .06 | 7.42 |
| 90.8 | .44 | 175.8 | 26.5 | 12.02 | .06 | 7.48 |

RESULTATS (AVEC HC<0 CONSERVE)

TITRE: LOW POWER-1-3
FICHIER: 241016

| TEMPS MIN. | P.INI KG | P.FIN KG | INPUT MJ | OUTPUT MJ | CO gr | HC gr |
|---|---|---|---|---|---|---|
| 2.4 | 15.09 | 14.63 | 5.78 | 2.34 | 32 | 14 |
| 4.2 | 14.63 | 14.31 | 4.15 | 1.09 | 73 | 34 |
| 6.0 | 14.31 | 13.97 | 4.46 | .91 | 127 | 62 |
| 7.3 | 13.97 | 13.68 | 3.87 | .71 | 174 | 90 |
| 8.3 | 13.68 | 13.36 | 4.49 | .82 | 229 | 124 |
| 9.6 | 13.36 | 13.02 | 4.74 | .83 | 288 | 162 |
| 10.6 | 13.02 | 12.70 | 4.48 | .82 | 344 | 199 |
| 11.6 | 12.70 | 12.37 | 4.81 | .91 | 403 | 239 |
| 12.6 | 12.37 | 11.99 | 5.64 | 1.13 | 474 | 286 |
| 13.9 | 11.99 | 11.62 | 5.52 | 1.23 | 542 | 331 |
| 14.9 | 11.62 | 11.31 | 4.81 | 1.14 | 602 | 369 |
| 16.0 | 11.31 | 10.94 | 5.63 | 1.45 | 672 | 413 |
| 17.2 | 10.94 | 10.59 | 5.56 | 1.49 | 742 | 455 |
| 18.3 | 10.59 | 10.23 | 5.71 | 1.67 | 815 | 497 |
| 19.5 | 10.23 | 9.83 | 6.40 | 2.12 | 894 | 539 |
| 20.8 | 9.83 | 9.46 | 6.02 | 2.17 | 968 | 577 |
| 22.1 | 9.46 | 9.10 | 5.80 | 2.22 | 1039 | 611 |
| 23.4 | 9.10 | 8.74 | 6.16 | 2.50 | 1114 | 645 |
| 24.6 | 8.74 | 8.33 | 6.93 | 3.06 | 1198 | 679 |
| 26.2 | 8.33 | 7.95 | 6.58 | 3.16 | 1277 | 707 |
| 27.5 | 7.95 | 7.58 | 6.45 | 3.36 | 1353 | 730 |
| 29.0 | 7.58 | 7.18 | 7.28 | 4.26 | 1438 | 746 |
| 30.8 | 7.18 | 6.79 | 7.15 | 4.65 | 1511 | 756 |
| 32.6 | 6.79 | 6.40 | 7.15 | 4.93 | 1582 | 761 |
| 34.7 | 6.40 | 5.99 | 7.90 | 5.76 | 1659 | 762 |
| 37.0 | 5.99 | 5.58 | 8.13 | 6.31 | 1729 | 758 |
| 39.3 | 5.58 | 5.19 | 8.03 | 6.56 | 1791 | 749 |
| 41.6 | 5.19 | 4.78 | 8.54 | 7.33 | 1854 | 734 |
| 44.2 | 4.78 | 4.38 | 8.75 | 7.75 | 1925 | 714 |
| 46.5 | 4.38 | 3.97 | 9.10 | 8.42 | 1986 | 689 |
| 49.3 | 3.97 | 3.55 | 9.77 | 9.61 | 2042 | 654 |
| 52.2 | 3.55 | 3.14 | 10.01 | 10.41 | 2079 | 612 |
| 55.2 | 3.14 | 2.72 | 10.69 | 11.74 | 2102 | 557 |
| 59.1 | 2.72 | 2.30 | 11.14 | 13.02 | 2117 | 485 |
| 63.1 | 2.30 | 1.89 | 11.26 | 13.38 | 2132 | 408 |
| 67.2 | 1.89 | 1.47 | 12.34 | 15.39 | 2146 | 309 |
| 73.3 | 1.47 | 1.04 | 13.13 | 16.64 | 2166 | 196 |
| 82.1 | 1.04 | .62 | 13.29 | 17.15 | 2171 | 84 |
| 90.8 | .62 | 0.00 | 21.03 | 24.00 | 2179 | -23 |

FICHIER: 241016 LOW POWER-1-3
NOMBRE DE POINTS DE MESURE= 39

MESURES DE CHEMINEE (100% CHARGE BRULEE)

POIDS SEC= 15.1 KG
DUREE =105 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
2179 grammes
9.8 g/MJ
1245 g/Hre

HYDROCARBURES :
-23 grammes
-.1 g/MJ
-13 g/Hre

INPUT : 299 MJ

OUTPUT : 222 MJ

PUISSANCE:127 MJ/Hre

RENDEMENT:74.5 %

MESURES DE CHEMINEE (90.3% CHARGE BRULEE)

POIDS SEC= 13.6 KG
DUREE = 70 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
2146 grammes
13.0 g/MJ
1833 g/Hre

HYDROCARBURES :
309 grammes
1.9 g/MJ
264 g/Hre

INPUT : 251 MJ

OUTPUT : 165 MJ

PUISSANCE:141 MJ/Hre

RENDEMENT:65.5 %

MESURES AU PLENUM

| | | |
|---|---|---|
| FRACTION BRULEE | 95.9 % | 90.3 % |
| DUREE | 86 MIN | 70 MIN |
| DELTA T MOYEN | -81 C | -81 C |
| INPUT | 278 MJ | 251 MJ |
| OUTPUT | -288 MJ | -234 MJ |
| PUISSANCE: | MJ/H | MJ/H |
| RENDEMENT | -104 % | -93 % |

RESULTATS (AVEC HC<0 ELIMINE)

TITRE: LOW POWER-1-3
FICHIER: 241016

| TEMPS MIN. | P.INI KG | P.FIN KG | INPUT MJ | OUTPUT MJ | CO gr | HC gr |
|---|---|---|---|---|---|---|
| 2.4 | 15.09 | 14.63 | 5.78 | 2.34 | 32 | 14 |
| 4.2 | 14.63 | 14.31 | 4.15 | 1.09 | 73 | 34 |
| 6.0 | 14.31 | 13.97 | 4.46 | .91 | 127 | 62 |
| 7.3 | 13.97 | 13.68 | 3.87 | .71 | 174 | 90 |
| 8.3 | 13.68 | 13.36 | 4.49 | .82 | 229 | 124 |
| 9.6 | 13.36 | 13.02 | 4.74 | .83 | 288 | 162 |
| 10.6 | 13.02 | 12.70 | 4.48 | .82 | 344 | 199 |
| 11.6 | 12.70 | 12.37 | 4.81 | .91 | 403 | 239 |
| 12.6 | 12.37 | 11.99 | 5.64 | 1.13 | 474 | 286 |
| 13.9 | 11.99 | 11.62 | 5.52 | 1.23 | 542 | 33[illegible] |
| 14.9 | 11.62 | 11.31 | 4.81 | 1.14 | 602 | 369 |
| 16.0 | 11.31 | 10.94 | 5.63 | 1.45 | 672 | 413 |
| 17.2 | 10.94 | 10.59 | 5.56 | 1.49 | 742 | 455 |
| 18.3 | 10.59 | 10.23 | 5.71 | 1.67 | 815 | 497 |
| 19.5 | 10.23 | 9.83 | 6.40 | 2.12 | 894 | 539 |
| 20.8 | 9.83 | 9.46 | 6.02 | 2.17 | 968 | 577 |
| 22.1 | 9.46 | 9.10 | 5.80 | 2.22 | 1039 | 611 |
| 23.4 | 9.10 | 8.74 | 6.16 | 2.50 | 1114 | 645 |
| 24.6 | 8.74 | 8.33 | 6.93 | 3.06 | 1198 | 679 |
| 26.2 | 8.33 | 7.95 | 6.58 | 3.16 | 1277 | 707 |
| 27.5 | 7.95 | 7.58 | 6.45 | 3.36 | 1353 | 730 |
| 29.0 | 7.58 | 7.18 | 7.28 | 4.26 | 1438 | 746 |
| 30.8 | 7.18 | 6.79 | 7.15 | 4.65 | 1511 | 756 |
| 32.6 | 6.79 | 6.40 | 7.15 | 4.93 | 1582 | 761 |
| 34.7 | 6.40 | 5.99 | 7.90 | 5.76 | 1659 | 762 |
| 37.0 | 5.99 | 5.58 | 8.13 | 6.07 | 1729 | 762 |
| 39.3 | 5.58 | 5.19 | 8.03 | 6.06 | 1791 | 762 |
| 41.6 | 5.19 | 4.78 | 8.54 | 6.47 | 1854 | 762 |
| 44.2 | 4.78 | 4.38 | 8.75 | 6.63 | 1925 | 762 |
| 46.5 | 4.38 | 3.97 | 9.10 | 7.05 | 1986 | 762 |
| 49.3 | 3.97 | 3.55 | 9.77 | 7.66 | 2042 | 762 |
| 52.2 | 3.55 | 3.14 | 10.01 | 8.02 | 2079 | 762 |
| 55.2 | 3.14 | 2.72 | 10.69 | 8.66 | 2102 | 762 |
| 59.1 | 2.72 | 2.30 | 11.14 | 8.98 | 2117 | 762 |
| 63.1 | 2.30 | 1.89 | 11.26 | 9.06 | 2132 | 762 |
| 67.2 | 1.89 | 1.47 | 12.34 | 9.84 | 2146 | 762 |
| 73.3 | 1.47 | 1.04 | 13.13 | 10.29 | 2166 | 762 |
| 82.1 | 1.04 | .62 | 13.29 | 10.93 | 2171 | 762 |
| 90.8 | .62 | 0.00 | 21.03 | 17.97 | 2179 | 762 |

RESULTATS (AVEC HC<0 ELIMINE)

FICHIER: 241016 LOW POWER-1-3
NOMBRE DE POINTS DE MESURE= 39

MESURES DE CHEMINEE (100% CHARGE BRULEE)

POIDS SEC= 15.1 KG
DUREE =105 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
2179 grammes
12.2 g/MJ
1245 g/Hre
HYDROCARBURES :
762 grammes
4.3 g/MJ
435 g/Hre

INPUT : 299 MJ

OUTPUT : 178 MJ

PUISSANCE:102 MJ/Hre

RENDEMENT:59.7 %

MESURES DE CHEMINEE (90.3% CHARGE BRULEE)

POIDS SEC= 13.6 KG
DUREE = 70 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
2146 grammes
15.4 g/MJ
1833 g/Hre
HYDROCARBURES :
762 grammes
5.5 g/MJ
651 g/Hre

INPUT : 251 MJ

OUTPUT : 139 MJ

PUISSANCE:119 MJ/Hre

RENDEMENT:55.4 %

MESURES AU PLENUM

| | | |
|---|---|---|
| FRACTION BRULEE | 95.9 % | 90.3 % |
| DUREE | 86 MIN | 70 MIN |
| DELTA T MOYEN | -81 C | -81 C |
| INPUT | 278 MJ | 251 MJ |
| OUTPUT | -288 MJ | -234 MJ |
| PUISSANCE: | MJ/H | MJ/H |
| RENDEMENT | -104 % | -93 % |

MESURES

FICHIER: 291015
TITRE: 18 KW-1-3
POIDS INITIAL (BASE HUMIDE)=19.51KG
HUMIDITE DU BOIS=15%
POIDS INTIAL (BASE SECHE)16.58KG
INTERVALLE DE LECTURE (%) 2.5
NBRE. DE LECTURES AU CHANGEMENT D'ETAT 1

| TEMPS MIN. | POIDS KG | T.CH. C | T.AMB C | CO2 % | CO % | O2 % |
|---|---|---|---|---|---|---|
| 2.6 | 18.97 | 130.6 | 25.0 | 12.87 | 3.33 | 6.67 |
| 4.2 | 18.50 | 154.5 | 25.0 | 15.12 | 4.97 | 3.72 |
| 5.7 | 18.00 | 176.1 | 25.0 | 15.47 | 5.86 | 2.99 |
| 6.9 | 17.53 | 189.6 | 25.1 | 15.72 | 5.83 | 2.68 |
| 8.2 | 17.06 | 199.4 | 25.0 | 15.86 | 6.14 | 2.70 |
| 9.4 | 16.58 | 206.3 | 25.1 | 15.70 | 6.76 | 2.60 |
| 10.7 | 16.07 | 211.3 | 25.0 | 15.32 | 6.82 | 2.92 |
| 11.9 | 15.58 | 214.3 | 25.0 | 15.40 | 7.14 | 2.88 |
| 13.2 | 15.11 | 215.4 | 25.1 | 15.29 | 7.21 | 2.83 |
| 14.5 | 14.60 | 217.8 | 25.1 | 15.37 | 7.40 | 2.73 |
| 15.7 | 14.07 | 221.2 | 25.2 | 15.54 | 7.45 | 2.66 |
| 17.0 | 13.58 | 223.3 | 25.1 | 15.65 | 7.57 | 2.52 |
| 18.0 | 13.16 | 224.6 | 25.2 | 15.64 | 7.91 | 2.45 |
| 19.3 | 12.66 | 224.0 | 25.2 | 15.99 | 7.89 | 1.96 |
| 20.5 | 12.13 | 221.1 | 25.2 | 16.11 | 7.84 | 1.92 |
| 21.8 | 11.66 | 218.8 | 25.2 | 15.41 | 9.80 | 2.38 |
| 22.3 | 11.48 | 215.7 | 25.2 | 15.66 | 8.41 | 3.07 |
| 23.6 | 11.21 | 195.1 | 25.2 | 15.72 | 5.75 | 3.75 |
| 26.6 | 10.71 | 160.7 | 25.3 | 15.67 | 4.24 | 4.09 |
| 30.1 | 10.23 | 139.7 | 25.3 | 15.41 | 3.72 | 4.21 |
| 33.4 | 9.80 | 131.5 | 25.3 | 15.74 | 2.20 | 3.45 |
| 33.6 | 9.75 | 136.5 | 25.3 | 15.65 | 2.83 | 3.07 |
| 35.9 | 9.19 | 174.1 | 25.3 | 15.85 | 4.83 | 2.30 |
| 37.7 | 8.71 | 192.6 | 25.3 | 16.02 | 4.63 | 2.29 |
| 38.9 | 8.40 | 200.3 | 25.3 | 15.04 | 6.55 | 3.54 |
| 39.7 | 8.28 | 191.4 | 25.3 | 15.28 | 4.80 | 4.01 |
| 43.9 | 7.80 | 145.9 | 25.3 | 14.68 | 2.74 | 5.30 |
| 48.2 | 7.37 | 124.9 | 25.2 | 14.99 | 1.34 | 5.15 |
| 48.7 | 7.29 | 133.3 | 25.2 | 15.58 | 1.80 | 4.33 |
| 51.2 | 6.83 | 170.8 | 25.2 | 16.32 | 3.44 | 2.24 |
| 53.5 | 6.33 | 187.0 | 25.2 | 15.15 | 6.50 | 2.93 |
| 54.2 | 6.20 | 188.6 | 25.2 | 15.37 | 6.21 | 3.46 |
| 57.5 | 5.83 | 154.1 | 25.4 | 15.32 | 2.78 | 4.72 |
| 63.7 | 5.35 | 120.7 | 25.2 | 14.03 | 2.06 | 6.17 |
| 66.2 | 5.13 | 116.9 | 25.2 | 14.61 | .88 | 5.84 |
| 68.2 | 4.85 | 146.5 | 24.7 | 16.29 | 1.69 | 3.16 |
| 71.2 | 4.38 | 181.4 | 24.9 | 16.30 | 1.87 | 2.69 |
| 72.5 | 4.22 | 186.7 | 25.0 | 14.87 | 4.40 | 3.60 |
| 77.8 | 3.90 | 133.9 | 25.3 | 13.57 | 1.70 | 6.23 |
| 83.8 | 3.61 | 108.0 | 25.3 | 13.71 | .39 | 6.53 |
| 86.0 | 3.40 | 139.5 | 25.3 | 13.07 | .62 | 6.82 |
| 90.6 | 2.93 | 181.5 | 25.3 | 13.99 | .58 | 5.66 |
| 93.4 | 2.69 | 188.3 | 25.2 | 14.22 | 2.00 | 4.85 |
| 100.6 | 2.44 | 118.5 | 25.2 | 12.16 | 1.53 | 7.59 |
| 102.6 | 2.34 | 111.2 | 25.1 | 10.97 | .74 | 9.16 |
| 108.4 | 1.93 | 151.9 | 25.2 | 11.43 | .43 | 8.49 |
| 116.5 | 1.46 | 174.4 | 25.1 | 10.79 | .37 | 9.22 |
| 119.7 | 1.32 | 174.2 | 25.2 | 11.34 | .64 | 8.21 |
| 124.4 | 1.25 | 128.0 | 25.2 | 9.76 | .59 | 10.51 |
| 130.7 | .96 | 155.2 | 25.3 | 9.57 | .37 | 10.62 |
| 143.2 | .48 | 160.1 | 25.2 | 9.57 | .37 | 10.62 |

RESULTATS (AVEC HC<0 CONSERVE)

TITRE: 18 KW-1-3
FICHIER: 291015

| TEMPS MIN. | P.INI KG | P.FIN KG | INPUT MJ | OUTPUT MJ | CO gr | HC gr |
|---|---|---|---|---|---|---|
| 2.6 | 16.58 | 16.06 | 6.54 | 1.28 | 62 | 37 |
| 4.2 | 16.06 | 15.73 | 4.28 | .75 | 110 | 64 |
| 5.7 | 15.73 | 15.39 | 4.48 | .72 | 166 | 95 |
| 6.9 | 15.39 | 15.05 | 4.51 | .79 | 221 | 128 |
| 8.2 | 15.05 | 14.71 | 4.78 | .76 | 280 | 165 |
| 9.4 | 14.71 | 14.34 | 5.13 | .78 | 347 | 207 |
| 10.7 | 14.34 | 13.97 | 5.35 | .84 | 418 | 252 |
| 11.9 | 13.97 | 13.60 | 5.34 | .82 | 491 | 298 |
| 13.2 | 13.60 | 13.22 | 5.64 | .95 | 568 | 346 |
| 14.5 | 13.22 | 12.80 | 6.16 | 1.08 | 654 | 400 |
| 15.7 | 12.80 | 12.40 | 6.17 | 1.13 | 738 | 453 |
| 17.0 | 12.40 | 12.03 | 5.63 | 1.11 | 816 | 502 |
| 18.0 | 12.03 | 11.66 | 5.89 | 1.19 | 899 | 552 |
| 19.3 | 11.66 | 11.23 | 6.72 | 1.56 | 993 | 607 |
| 20.5 | 11.23 | 10.82 | 6.65 | 1.67 | 1086 | 660 |
| 21.8 | 10.82 | 10.54 | 4.44 | .93 | 1157 | 698 |
| 22.3 | 10.54 | 10.36 | 3.08 | .69 | 1201 | 725 |
| 23.6 | 10.36 | 10.03 | 5.37 | 1.61 | 1261 | 767 |
| 26.6 | 10.03 | 9.61 | 7.04 | 2.70 | 1327 | 816 |
| 30.1 | 9.61 | 9.21 | 6.68 | 2.99 | 1385 | 855 |
| 33.4 | 9.21 | 9.01 | 3.61 | 2.22 | 1407 | 867 |
| 33.6 | 9.01 | 8.74 | 4.64 | 2.81 | 1442 | 881 |
| 35.9 | 8.74 | 8.28 | 8.05 | 4.27 | 1533 | 911 |
| 37.7 | 8.28 | 7.93 | 6.25 | 3.43 | 1601 | 933 |
| 38.9 | 7.93 | 7.74 | 3.50 | 1.51 | 1649 | 952 |
| 39.7 | 7.74 | 7.47 | 4.89 | 2.37 | 1703 | 976 |
| 43.9 | 7.47 | 7.07 | 7.55 | 4.42 | 1759 | 1005 |
| 48.2 | 7.07 | 6.84 | 4.40 | 3.14 | 1777 | 1015 |
| 48.7 | 6.84 | 6.59 | 4.77 | 3.33 | 1802 | 1026 |
| 51.2 | 6.59 | 6.16 | 8.57 | 6.05 | 1881 | 1036 |
| 53.5 | 6.16 | 5.88 | 5.75 | 3.20 | 1966 | 1055 |
| 54.2 | 5.88 | 5.65 | 4.69 | 2.48 | 2030 | 1075 |
| 57.5 | 5.65 | 5.26 | 8.16 | 5.39 | 2094 | 1098 |
| 63.7 | 5.26 | 4.94 | 6.98 | 5.00 | 2140 | 1113 |
| 66.2 | 4.94 | 4.71 | 5.07 | 4.12 | 2155 | 1118 |
| 68.2 | 4.71 | 4.36 | 7.82 | 6.64 | 2197 | 1116 |
| 71.2 | 4.36 | 4.06 | 6.88 | 6.07 | 2239 | 1108 |
| 72.5 | 4.06 | 3.84 | 5.25 | 3.73 | 2305 | 1113 |
| 77.8 | 3.84 | 3.56 | 6.92 | 5.71 | 2349 | 1115 |
| 83.8 | 3.56 | 3.32 | 5.86 | 5.52 | 2358 | 1110 |
| 86.0 | 3.32 | 3.00 | 8.10 | 7.73 | 2381 | 1096 |
| 90.6 | 3.00 | 2.67 | 8.83 | 8.68 | 2403 | 1074 |
| 93.4 | 2.67 | 2.44 | 6.20 | 5.48 | 2450 | 1065 |
| 100.6 | 2.44 | 2.27 | 4.55 | 3.97 | 2481 | 1064 |
| 102.6 | 2.27 | 2.03 | 6.69 | 6.18 | 2506 | 1058 |
| 108.4 | 2.03 | 1.62 | 12.12 | 12.05 | 2535 | 1028 |
| 116.5 | 1.62 | 1.32 | 8.90 | 8.71 | 2554 | 1007 |
| 119.7 | 1.32 | 1.23 | 3.04 | 3.11 | 2565 | 996 |
| 124.4 | 1.23 | 1.06 | 5.22 | 4.75 | 2584 | 993 |
| 130.7 | 1.06 | .69 | 11.78 | 11.22 | 2613 | 972 |
| 143.2 | .69 | 0.00 | 23.29 | 22.03 | 2670 | 935 |

RESULTATS (AVEC HC<0 CONSERVE)

FICHIER: 291015 18 KW-1-3
NOMBRE DE POINTS DE MESURE= 51

MESURES DE CHEMINEE (100% CHARGE BRULEE)

POIDS SEC= 16.6 KG
DUREE =153 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
2670 grammes
13.4 g/MJ
1047 g/Hre

HYDROCARBURES :
935 grammes
4.7 g/MJ
367 g/Hre

INPUT : 328 MJ

OUTPUT : 200 MJ

PUISSANCE: 78 MJ/Hre

RENDEMENT:60.8 %

MESURES DE CHEMINEE (90.3% CHARGE BRULEE)

POIDS SEC= 15.0 KG
DUREE =112 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
2535 grammes
16.9 g/MJ
1353 g/Hre

HYDROCARBURES :
1028 grammes
6.9 g/MJ
549 g/Hre

INPUT : 276 MJ

OUTPUT : 150 MJ

PUISSANCE: 80 MJ/Hre

RENDEMENT:54.3 %

MESURES AU PLENUM

| | | |
|---|---|---|
| FRACTION BRULEE | 95.8 % | 90.3 % |
| DUREE | 137 MIN | 112 MIN |
| DELTA T MOYEN | 26 C | 25 C |
| INPUT | 305 MJ | 276 MJ |
| OUTPUT | 147 MJ | 121 MJ |
| PUISSANCE: | 64 MJ/H | 64 MJ/H |
| RENDEMENT | 48 % | 44 % |

RESULTATS (AVEC HC<0 ELIMINE)

TITRE: 18 KW-1-3
FICHIER: 291015

| TEMPS MIN. | P.INI KG | P.FIN KG | INPUT MJ | OUTPUT MJ | CO gr | HC gr |
|---|---|---|---|---|---|---|
| 2.6 | 16.58 | 16.06 | 6.54 | 1.28 | 62 | 37 |
| 4.2 | 16.06 | 15.73 | 4.28 | .75 | 110 | 64 |
| 5.7 | 15.73 | 15.39 | 4.48 | .72 | 166 | 95 |
| 6.9 | 15.39 | 15.05 | 4.51 | .79 | 221 | 128 |
| 8.2 | 15.05 | 14.71 | 4.78 | .76 | 280 | 165 |
| 9.4 | 14.71 | 14.34 | 5.13 | .78 | 347 | 207 |
| 10.7 | 14.34 | 13.97 | 5.35 | .84 | 418 | 252 |
| 11.9 | 13.97 | 13.60 | 5.34 | .82 | 491 | 298 |
| 13.2 | 13.60 | 13.22 | 5.64 | .95 | 568 | 346 |
| 14.5 | 13.22 | 12.80 | 6.16 | 1.08 | 654 | 400 |
| 15.7 | 12.80 | 12.40 | 6.17 | 1.13 | 738 | 453 |
| 17.0 | 12.40 | 12.03 | 5.63 | 1.11 | 816 | 502 |
| 18.0 | 12.03 | 11.66 | 5.89 | 1.19 | 899 | 552 |
| 19.3 | 11.66 | 11.23 | 6.72 | 1.56 | 993 | 607 |
| 20.5 | 11.23 | 10.82 | 6.65 | 1.67 | 1086 | 660 |
| 21.8 | 10.82 | 10.54 | 4.44 | .93 | 1157 | 698 |
| 22.3 | 10.54 | 10.36 | 3.08 | .69 | 1201 | 725 |
| 23.6 | 10.36 | 10.03 | 5.37 | 1.61 | 1261 | 767 |
| 26.6 | 10.03 | 9.61 | 7.04 | 2.70 | 1327 | 816 |
| 30.1 | 9.61 | 9.21 | 6.68 | 2.99 | 1385 | 855 |
| 33.4 | 9.21 | 9.01 | 3.61 | 2.22 | 1407 | 867 |
| 33.6 | 9.01 | 8.74 | 4.64 | 2.81 | 1442 | 881 |
| 35.9 | 8.74 | 8.28 | 8.05 | 4.27 | 1533 | 911 |
| 37.7 | 8.28 | 7.93 | 6.25 | 3.43 | 1601 | 933 |
| 38.9 | 7.93 | 7.74 | 3.50 | 1.51 | 1649 | 952 |
| 39.7 | 7.74 | 7.47 | 4.89 | 2.37 | 1703 | 976 |
| 43.9 | 7.47 | 7.07 | 7.55 | 4.42 | 1759 | 1005 |
| 48.2 | 7.07 | 6.84 | 4.40 | 3.14 | 1777 | 1015 |
| 48.7 | 6.84 | 6.59 | 4.77 | 3.33 | 1802 | 1026 |
| 51.2 | 6.59 | 6.16 | 8.57 | 6.05 | 1881 | 1036 |
| 53.5 | 6.16 | 5.88 | 5.75 | 3.20 | 1966 | 1055 |
| 54.2 | 5.88 | 5.65 | 4.69 | 2.48 | 2030 | 1075 |
| 57.5 | 5.65 | 5.26 | 8.16 | 5.39 | 2094 | 1098 |
| 63.7 | 5.26 | 4.94 | 6.98 | 5.00 | 2140 | 1113 |
| 66.2 | 4.94 | 4.71 | 5.07 | 4.12 | 2155 | 1118 |
| 68.2 | 4.71 | 4.36 | 7.82 | 6.53 | 2197 | 1118 |
| 71.2 | 4.36 | 4.06 | 6.88 | 5.59 | 2239 | 1118 |
| 72.5 | 4.06 | 3.84 | 5.25 | 3.73 | 2305 | 1124 |
| 77.8 | 3.84 | 3.56 | 6.92 | 5.71 | 2349 | 1126 |
| 83.8 | 3.56 | 3.32 | 5.86 | 5.22 | 2358 | 1126 |
| 86.0 | 3.32 | 3.00 | 8.10 | 6.96 | 2381 | 1126 |
| 90.6 | 3.00 | 2.67 | 8.83 | 7.43 | 2403 | 1126 |
| 93.4 | 2.67 | 2.44 | 6.20 | 5.01 | 2450 | 1126 |
| 100.6 | 2.44 | 2.27 | 4.55 | 3.87 | 2481 | 1126 |
| 102.6 | 2.27 | 2.03 | 6.69 | 5.85 | 2506 | 1126 |
| 108.4 | 2.03 | 1.62 | 12.12 | 10.39 | 2535 | 1126 |
| 116.5 | 1.62 | 1.32 | 8.90 | 7.51 | 2554 | 1126 |
| 119.7 | 1.32 | 1.23 | 3.04 | 2.52 | 2565 | 1126 |
| 124.4 | 1.23 | 1.06 | 5.22 | 4.55 | 2584 | 1126 |
| 130.7 | 1.06 | .69 | 11.78 | 10.08 | 2613 | 1126 |
| 143.2 | .69 | 0.00 | 23.29 | 19.95 | 2670 | 1126 |

RESULTATS (AVEC HC<0 ELIMINE)

FICHIER: 291015 18 KW-1-3
NOMBRE DE POINTS DE MESURE= 51

MESURES DE CHEMINEE (100% CHARGE BRULEE)

POIDS SEC= 16.6 KG
DUREE =153 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
2670 grammes
14.1 g/MJ
1047 g/Hre
HYDROCARBURES :
1126 grammes
6.0 g/MJ
441 g/Hre

INPUT : 328 MJ

OUTPUT : 189 MJ

PUISSANCE: 74 MJ/Hre

RENDEMENT:57.6 %

MESURES DE CHEMINEE (90.3% CHARGE BRULEE)

POIDS SEC= 15.0 KG
DUREE =112 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
2535 grammes
17.6 g/MJ
1353 g/Hre
HYDROCARBURES :
1126 grammes
7.8 g/MJ
601 g/Hre

INPUT : 276 MJ

OUTPUT : 144 MJ

PUISSANCE: 77 MJ/Hre

RENDEMENT:52.3 %

MESURES AU PLENUM

| | | |
|---|---|---|
| FRACTION BRULEE | 95.8 % | 90.3 % |
| DUREE | 137 MIN | 112 MIN |
| DELTA T MOYEN | 26 C | 25 C |
| INPUT | 305 MJ | 276 MJ |
| OUTPUT | 147 MJ | 121 MJ |
| PUISSANCE: | 64 MJ/H | 64 MJ/H |
| RENDEMENT | 48 % | 44 % |

MESURES

FICHIER: 301011
TITRE: 18 KW-2-3
POIDS INITIAL (BASE HUMIDE)=18.18KG
HUMIDITE DU BOIS=15%
POIDS INTIAL (BASE SECHE)15.45KG
INTERVALLE DE LECTURE [%] 2.5
NBRE. DE LECTURES AU CHANGEMENT D'ETAT 1

| TEMPS MIN. | POIDS KG | T.CH. C | T.AMB C | CO2 % | CO % | O2 % |
|---|---|---|---|---|---|---|
| 1.4 | 17.66 | 155.4 | 24.7 | 14.89 | 6.10 | 4.30 |
| 2.7 | 17.20 | 166.0 | 24.7 | 15.15 | 6.58 | 3.96 |
| 3.7 | 16.78 | 174.0 | 24.7 | 15.25 | 6.78 | 3.61 |
| 4.7 | 16.36 | 180.8 | 24.7 | 15.30 | 6.56 | 3.61 |
| 5.9 | 15.85 | 188.7 | 24.8 | 16.09 | 6.84 | 2.76 |
| 6.9 | 15.42 | 194.9 | 24.8 | 16.07 | 6.72 | 2.62 |
| 7.9 | 14.99 | 200.2 | 24.8 | 16.00 | 6.59 | 2.66 |
| 9.2 | 14.51 | 204.7 | 24.6 | 15.91 | 6.74 | 2.67 |
| 10.5 | 14.03 | 208.1 | 24.7 | 15.70 | 6.62 | 2.71 |
| 11.5 | 13.63 | 209.8 | 24.8 | 15.74 | 6.65 | 2.65 |
| 12.7 | 13.17 | 212.1 | 24.8 | 15.63 | 7.06 | 2.55 |
| 14.0 | 12.68 | 213.2 | 24.9 | 15.74 | 7.10 | 2.41 |
| 15.2 | 12.25 | 211.4 | 24.8 | 15.33 | 6.96 | 3.62 |
| 15.5 | 12.19 | 207.4 | 24.8 | 15.33 | 6.96 | 3.62 |
| 17.5 | 11.81 | 176.0 | 24.7 | 15.03 | 3.89 | 4.59 |
| 21.3 | 11.35 | 142.1 | 24.7 | 14.18 | 2.52 | 5.40 |
| 25.8 | 10.87 | 124.4 | 24.8 | 14.13 | 1.98 | 5.31 |
| 26.0 | 10.84 | 127.5 | 24.8 | 14.42 | 2.47 | 4.67 |
| 27.8 | 10.44 | 158.8 | 24.6 | 15.11 | 3.67 | 3.18 |
| 29.8 | 9.95 | 184.5 | 24.7 | 15.38 | 3.26 | 3.04 |
| 31.6 | 9.52 | 200.2 | 24.5 | 15.12 | 5.17 | 3.67 |
| 32.1 | 9.43 | 201.3 | 24.6 | 15.24 | 4.24 | 4.02 |
| 35.1 | 9.08 | 161.6 | 24.7 | 13.43 | 1.97 | 6.39 |
| 41.6 | 8.63 | 114.7 | 24.8 | 11.93 | .99 | 7.86 |
| 42.1 | 8.57 | 114.4 | 24.7 | 11.76 | .70 | 8.18 |
| 44.9 | 8.18 | 148.7 | 24.8 | 13.68 | 1.48 | 5.65 |
| 47.7 | 7.70 | 184.0 | 24.8 | 14.55 | 1.88 | 4.49 |
| 50.2 | 7.25 | 205.2 | 24.7 | 15.02 | 1.96 | 4.14 |
| 51.9 | 6.96 | 211.8 | 24.8 | 14.97 | 3.85 | 4.27 |
| 53.2 | 6.81 | 191.2 | 24.9 | 14.12 | 2.49 | 5.32 |
| 59.5 | 6.36 | 127.9 | 24.8 | 11.08 | 1.68 | 8.54 |
| 63.4 | 6.14 | 112.7 | 24.9 | 11.03 | .75 | 8.94 |
| 65.6 | 5.90 | 143.7 | 24.8 | 12.68 | 1.01 | 6.69 |
| 68.9 | 5.44 | 184.7 | 24.8 | 13.47 | 1.24 | 5.56 |
| 72.2 | 4.99 | 208.0 | 24.9 | 13.29 | .99 | 5.99 |
| 73.7 | 4.80 | 211.3 | 24.7 | 13.69 | 2.68 | 5.47 |
| 77.5 | 4.54 | 159.6 | 25.0 | 12.25 | 1.45 | 7.53 |
| 84.0 | 4.17 | 117.1 | 23.3 | 9.06 | .87 | 10.91 |
| 85.0 | 4.08 | 126.2 | 23.1 | 9.69 | .57 | 10.49 |
| 90.5 | 3.61 | 170.5 | 23.8 | 10.54 | .27 | 9.22 |
| 95.6 | 3.18 | 189.0 | 23.5 | 10.45 | .28 | 9.44 |
| 101.1 | 2.71 | 193.0 | 23.3 | 9.94 | .35 | 10.00 |
| 105.4 | 2.42 | 180.7 | 23.7 | 11.01 | 1.11 | 8.87 |
| 108.9 | 2.28 | 142.8 | 23.7 | 8.59 | .66 | 11.73 |
| 109.1 | 2.26 | 143.2 | 23.7 | 8.55 | .66 | 11.73 |
| 114.2 | 1.79 | 178.6 | 23.9 | 11.40 | .13 | 7.83 |
| 119.4 | 1.48 | 176.9 | 24.6 | 11.62 | .72 | 7.66 |
| 126.3 | 1.34 | 122.2 | 24.3 | 9.81 | .50 | 10.26 |
| 126.6 | 1.31 | 124.2 | 24.3 | 9.74 | .43 | 10.48 |
| 135.4 | .89 | 163.9 | 23.8 | 8.51 | .17 | 11.63 |
| 149.7 | .45 | 142.4 | 24.0 | 7.06 | .43 | 13.51 |

RESULTATS (AVEC HC<0 CONSERVE)

TITRE: 18 KW-2-3
FICHIER: 301011

| TEMPS MIN. | P.INI KG | P.FIN KG | INPUT MJ | OUTPUT MJ | CO gr | HC gr |
|---|---|---|---|---|---|---|
| 1.4 | 15.45 | 14.95 | 6.30 | .49 | 79 | 46 |
| 2.7 | 14.95 | 14.65 | 3.88 | .31 | 130 | 77 |
| 3.7 | 14.65 | 14.35 | 3.91 | .38 | 181 | 109 |
| 4.7 | 14.35 | 14.02 | 4.48 | .50 | 239 | 147 |
| 5.9 | 14.02 | 13.68 | 4.70 | .57 | 298 | 188 |
| 6.9 | 13.68 | 13.36 | 4.47 | .63 | 355 | 226 |
| 7.9 | 13.36 | 13.01 | 4.92 | .76 | 417 | 269 |
| 9.2 | 13.01 | 12.64 | 5.38 | .87 | 485 | 316 |
| 10.5 | 12.64 | 12.30 | 5.04 | .93 | 549 | 359 |
| 11.5 | 12.30 | 11.96 | 5.06 | .99 | 614 | 401 |
| 12.7 | 11.96 | 11.59 | 5.71 | 1.16 | 690 | 449 |
| 14.0 | 11.59 | 11.22 | 5.67 | 1.24 | 765 | 496 |
| 15.2 | 11.22 | 11.02 | 3.13 | .61 | 806 | 525 |
| 15.5 | 11.02 | 10.84 | 2.82 | .56 | 842 | 550 |
| 17.5 | 10.84 | 10.49 | 5.49 | 1.74 | 891 | 592 |
| 21.3 | 10.49 | 10.10 | 6.32 | 2.74 | 935 | 629 |
| 25.8 | 10.10 | 9.89 | 3.44 | 1.79 | 955 | 645 |
| 26.0 | 9.89 | 9.71 | 2.90 | 1.49 | 976 | 658 |
| 27.8 | 9.71 | 9.33 | 6.28 | 3.15 | 1035 | 685 |
| 29.8 | 9.33 | 8.93 | 6.60 | 3.54 | 1092 | 709 |
| 31.6 | 8.93 | 8.71 | 3.76 | 1.51 | 1135 | 731 |
| 32.1 | 8.71 | 8.52 | 3.25 | 1.38 | 1167 | 750 |
| 35.1 | 8.52 | 8.17 | 6.01 | 3.31 | 1204 | 774 |
| 41.6 | 8.17 | 7.95 | 3.97 | 2.77 | 1219 | 782 |
| 42.1 | 7.95 | 7.75 | 3.52 | 2.52 | 1229 | 789 |
| 44.9 | 7.75 | 7.36 | 6.84 | 4.85 | 1264 | 799 |
| 47.7 | 7.36 | 6.95 | 7.60 | 5.41 | 1310 | 807 |
| 50.2 | 6.95 | 6.62 | 6.23 | 4.40 | 1348 | 814 |
| 51.9 | 6.62 | 6.42 | 3.74 | 2.12 | 1385 | 827 |
| 53.2 | 6.42 | 6.15 | 5.21 | 3.41 | 1424 | 838 |
| 59.5 | 6.15 | 5.85 | 5.97 | 4.45 | 1466 | 843 |
| 63.4 | 5.85 | 5.64 | 4.23 | 3.53 | 1481 | 843 |
| 65.6 | 5.64 | 5.32 | 6.44 | 5.70 | 1508 | 834 |
| 68.9 | 5.32 | 4.90 | 8.72 | 7.86 | 1552 | 815 |
| 72.2 | 4.90 | 4.61 | 6.42 | 5.82 | 1578 | 801 |
| 73.7 | 4.61 | 4.40 | 4.59 | 3.39 | 1619 | 804 |
| 77.5 | 4.40 | 4.11 | 6.49 | 5.28 | 1658 | 803 |
| 84.0 | 4.11 | 3.90 | 4.92 | 4.38 | 1683 | 797 |
| 85.0 | 3.90 | 3.63 | 6.15 | 5.53 | 1703 | 790 |
| 90.5 | 3.63 | 3.21 | 10.19 | 10.45 | 1720 | 751 |
| 95.6 | 3.21 | 2.79 | 10.63 | 10.56 | 1738 | 716 |
| 101.1 | 2.79 | 2.44 | 9.42 | 9.19 | 1758 | 686 |
| 105.4 | 2.44 | 2.23 | 5.58 | 4.85 | 1789 | 681 |
| 108.9 | 2.23 | 2.16 | 2.15 | 1.87 | 1799 | 680 |
| 109.1 | 2.16 | 1.93 | 6.39 | 5.60 | 1827 | 674 |
| 114.2 | 1.93 | 1.56 | 10.73 | 12.87 | 1836 | 600 |
| 119.4 | 1.56 | 1.34 | 6.46 | 6.84 | 1862 | 572 |
| 126.3 | 1.34 | 1.26 | 2.42 | 2.37 | 1869 | 567 |
| 126.6 | 1.26 | 1.05 | 6.54 | 6.26 | 1887 | 557 |
| 135.4 | 1.05 | .64 | 13.20 | 13.35 | 1904 | 515 |
| 149.7 | .64 | 0.00 | 21.54 | 18.02 | 1982 | 519 |

RESULTATS (AVEC HC<0 CONSERVE)

FICHIER: 301011 18 KW-2-3
NOMBRE DE POINTS DE MESURE= 51

MESURES DE CHEMINEE (100% CHARGE BRULEE)

POIDS SEC= 15.5 KG
DUREE =165 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
1982 grammes
9.7 g/MJ
721 g/Hre

HYDROCARBURES :
519 grammes
2.5 g/MJ
189 g/Hre

INPUT : 306 MJ

OUTPUT : 204 MJ

PUISSANCE: 74 MJ/Hre

RENDEMENT:66.8 %

MESURES DE CHEMINEE (91.3% CHARGE BRULEE)

POIDS SEC= 14.1 KG
DUREE =123 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
1862 grammes
11.3 g/MJ
909 g/Hre

HYDROCARBURES :
572 grammes
3.5 g/MJ
279 g/Hre

INPUT : 262 MJ

OUTPUT : 164 MJ

PUISSANCE: 80 MJ/Hre

RENDEMENT:62.7 %

MESURES AU PLENUM

| | | |
|---|---|---|
| FRACTION BRULEE | 95.9 % | 91.3 % |
| DUREE | 143 MIN | 123 MIN |
| DELTA T MOYEN | 26 C | 26 C |
| INPUT | 284 MJ | 262 MJ |
| OUTPUT | 152 MJ | 133 MJ |
| PUISSANCE: | 64 MJ/H | 65 MJ/H |
| RENDEMENT | 53 % | 51 % |

RESULTATS (AVEC HC<0 ELIMINE)

TITRE: 18 KW-2-3
FICHIER: 301011

| TEMPS MIN. | P.INI KG | P.FIN KG | INPUT MJ | OUTPUT MJ | CO gr | HC gr |
|---|---|---|---|---|---|---|
| 1.4 | 15.45 | 14.95 | 6.30 | .49 | 79 | 46 |
| 2.7 | 14.95 | 14.65 | 3.88 | .31 | 130 | 77 |
| 3.7 | 14.65 | 14.35 | 3.91 | .38 | 181 | 109 |
| 4.7 | 14.35 | 14.02 | 4.48 | .50 | 239 | 147 |
| 5.9 | 14.02 | 13.68 | 4.70 | .57 | 298 | 188 |
| 6.9 | 13.68 | 13.36 | 4.47 | .63 | 355 | 226 |
| 7.9 | 13.36 | 13.01 | 4.92 | .76 | 417 | 269 |
| 9.2 | 13.01 | 12.64 | 5.38 | .87 | 485 | 316 |
| 10.5 | 12.64 | 12.30 | 5.04 | .93 | 549 | 359 |
| 11.5 | 12.30 | 11.96 | 5.06 | .99 | 614 | 401 |
| 12.7 | 11.96 | 11.59 | 5.71 | 1.16 | 690 | 449 |
| 14.0 | 11.59 | 11.22 | 5.67 | 1.24 | 765 | 496 |
| 15.2 | 11.22 | 11.02 | 3.13 | .61 | 806 | 525 |
| 15.5 | 11.02 | 10.84 | 2.82 | .56 | 842 | 550 |
| 17.5 | 10.84 | 10.49 | 5.49 | 1.74 | 891 | 592 |
| 21.3 | 10.49 | 10.10 | 6.32 | 2.74 | 935 | 629 |
| 25.8 | 10.10 | 9.89 | 3.44 | 1.79 | 955 | 645 |
| 26.0 | 9.89 | 9.71 | 2.90 | 1.49 | 976 | 658 |
| 27.8 | 9.71 | 9.33 | 6.28 | 3.15 | 1035 | 685 |
| 29.8 | 9.33 | 8.93 | 6.60 | 3.54 | 1092 | 709 |
| 31.6 | 8.93 | 8.71 | 3.76 | 1.51 | 1135 | 731 |
| 32.1 | 8.71 | 8.52 | 3.25 | 1.38 | 1167 | 750 |
| 35.1 | 8.52 | 8.17 | 6.01 | 3.31 | 1204 | 774 |
| 41.6 | 8.17 | 7.95 | 3.97 | 2.77 | 1219 | 782 |
| 42.1 | 7.95 | 7.75 | 3.52 | 2.52 | 1229 | 789 |
| 44.9 | 7.75 | 7.36 | 6.84 | 4.85 | 1264 | 799 |
| 47.7 | 7.36 | 6.95 | 7.60 | 5.41 | 1310 | 807 |
| 50.2 | 6.95 | 6.62 | 6.23 | 4.40 | 1348 | 814 |
| 51.9 | 6.62 | 6.42 | 3.74 | 2.12 | 1385 | 827 |
| 53.2 | 6.42 | 6.15 | 5.21 | 3.41 | 1424 | 838 |
| 59.5 | 6.15 | 5.85 | 5.97 | 4.45 | 1466 | 843 |
| 63.4 | 5.85 | 5.64 | 4.23 | 3.51 | 1481 | 843 |
| 65.6 | 5.64 | 5.32 | 6.44 | 5.19 | 1508 | 843 |
| 68.9 | 5.32 | 4.90 | 8.72 | 6.82 | 1552 | 843 |
| 72.2 | 4.90 | 4.61 | 6.42 | 5.03 | 1578 | 843 |
| 73.7 | 4.61 | 4.40 | 4.59 | 3.39 | 1619 | 846 |
| 77.5 | 4.40 | 4.11 | 6.49 | 5.26 | 1658 | 846 |
| 84.0 | 4.11 | 3.90 | 4.92 | 4.03 | 1683 | 846 |
| 85.0 | 3.90 | 3.63 | 6.15 | 5.15 | 1703 | 846 |
| 90.5 | 3.63 | 3.21 | 10.19 | 8.26 | 1720 | 846 |
| 95.6 | 3.21 | 2.79 | 10.63 | 8.57 | 1738 | 846 |
| 101.1 | 2.79 | 2.44 | 9.42 | 7.54 | 1758 | 846 |
| 105.4 | 2.44 | 2.23 | 5.58 | 4.54 | 1789 | 846 |
| 108.9 | 2.23 | 2.16 | 2.15 | 1.79 | 1799 | 846 |
| 109.1 | 2.16 | 1.93 | 6.39 | 5.31 | 1827 | 846 |
| 114.2 | 1.93 | 1.56 | 10.73 | 8.72 | 1836 | 846 |
| 119.4 | 1.56 | 1.34 | 6.46 | 5.26 | 1862 | 846 |
| 126.3 | 1.34 | 1.26 | 2.42 | 2.10 | 1869 | 846 |
| 126.6 | 1.26 | 1.05 | 6.54 | 5.72 | 1887 | 846 |
| 135.4 | 1.05 | .64 | 13.20 | 10.97 | 1904 | 846 |
| 149.7 | .64 | 0.00 | 21.54 | 18.02 | 1982 | 850 |

RESULTATS (AVEC HC<0 ELIMINE)

FICHIER: 301011 18 KW-2-3
NOMBRE DE POINTS DE MESURE= 51

MESURES DE CHEMINEE (100% CHARGE BRULEE)

POIDS SEC= 15.5 KG
DUREE =165 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
1982 grammes
10.7 g/MJ
721 g/Hre

HYDROCARBURES :
850 grammes
4.6 g/MJ
309 g/Hre

INPUT : 306 MJ

OUTPUT : 186 MJ

PUISSANCE: 68 MJ/Hre

RENDEMENT:60.7 %

MESURES DE CHEMINEE (91.3% CHARGE BRULEE)

POIDS SEC= 14.1 KG
DUREE =123 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
1862 grammes
12.5 g/MJ
909 g/Hre

HYDROCARBURES :
846 grammes
5.7 g/MJ
413 g/Hre

INPUT : 262 MJ

OUTPUT : 149 MJ

PUISSANCE: 73 MJ/Hre

RENDEMENT:56.8 %

MESURES AU PLENUM

| | | |
|---|---|---|
| FRACTION BRULEE | 95.9 % | 91.3 % |
| DUREE | 143 MIN | 123 MIN |
| DELTA T MOYEN | 26 C | 26 C |
| INPUT | 284 MJ | 262 MJ |
| OUTPUT | 152 MJ | 133 MJ |
| PUISSANCE: | 64 MJ/H | 65 MJ/H |
| RENDEMENT | 53 % | 51 % |

MESURES

FICHIER: 291011
TITRE: 13KW-1-3
POIDS INITIAL (BASE HUMIDE)=19.62KG
HUMIDITE DU BOIS=15%
POIDS INTIAL (BASE SECHE)16.68KG
INTERVALLE DE LECTURE [%] 2.5
NBRE. DE LECTURES AU CHANGEMENT D'ETAT 1

| TEMPS MIN. | POIDS KG | T.CH. C | T.AMB C | CO2 % | CO % | O2 % |
|---|---|---|---|---|---|---|
| 3.1 | 19.11 | 128.6 | 24.0 | 9.48 | 1.46 | 10.96 |
| 5.9 | 18.62 | 143.6 | 24.0 | 10.92 | 1.71 | 9.47 |
| 8.4 | 18.12 | 160.9 | 24.1 | 12.92 | 1.73 | 7.56 |
| 10.4 | 17.59 | 186.1 | 23.9 | 15.67 | 4.91 | 3.78 |
| 11.7 | 17.14 | 200.0 | 23.9 | 15.43 | 5.48 | 3.96 |
| 12.2 | 17.01 | 200.3 | 24.0 | 15.09 | 4.34 | 4.35 |
| 14.7 | 16.67 | 167.4 | 24.1 | 12.35 | 2.36 | 7.49 |
| 19.2 | 16.14 | 142.0 | 24.2 | 14.94 | 3.32 | 4.93 |
| 22.7 | 15.69 | 136.7 | 24.1 | 14.79 | 3.30 | 5.03 |
| 26.0 | 15.19 | 132.3 | 24.2 | 15.08 | 6.02 | 4.13 |
| 28.8 | 14.71 | 126.8 | 24.3 | 13.99 | 3.78 | 5.28 |
| 33.3 | 14.20 | 120.5 | 24.3 | 11.83 | 3.04 | 7.96 |
| 37.3 | 13.72 | 116.9 | 24.2 | 14.32 | 3.13 | 5.27 |
| 41.8 | 13.21 | 116.9 | 24.2 | 13.96 | 2.49 | 5.56 |
| 47.1 | 12.72 | 111.6 | 24.3 | 11.38 | 2.21 | 8.36 |
| 53.4 | 12.24 | 97.1 | 24.3 | 14.19 | 2.48 | 5.07 |
| 53.6 | 12.20 | 100.0 | 24.3 | 14.19 | 2.48 | 5.07 |
| 55.4 | 11.73 | 140.1 | 24.3 | 15.46 | 5.77 | 1.88 |
| 56.9 | 11.25 | 161.3 | 24.3 | 15.12 | 8.25 | 1.96 |
| 57.7 | 11.06 | 164.8 | 24.4 | 15.49 | 6.42 | 3.27 |
| 59.4 | 10.77 | 151.3 | 24.3 | 15.29 | 2.54 | 4.53 |
| 64.6 | 10.29 | 123.3 | 24.2 | 10.06 | 2.30 | 9.64 |
| 74.9 | 9.80 | 88.7 | 24.3 | 8.26 | 1.71 | 11.49 |
| 78.6 | 9.62 | 84.6 | 24.2 | 11.70 | 1.41 | 8.66 |
| 80.9 | 9.29 | 112.9 | 24.4 | 14.90 | 3.17 | 3.28 |
| 82.9 | 8.83 | 154.4 | 24.4 | 15.69 | 3.60 | 2.10 |
| 85.2 | 8.32 | 180.8 | 24.4 | 15.22 | 5.46 | 3.01 |
| 85.7 | 8.26 | 181.8 | 24.3 | 15.47 | 5.01 | 3.49 |
| 90.9 | 7.84 | 131.4 | 24.4 | 10.45 | 1.97 | 9.33 |
| 104.8 | 7.35 | 77.7 | 24.4 | 7.86 | 2.70 | 11.78 |
| 107.1 | 7.25 | 76.0 | 24.4 | 10.56 | 1.13 | 9.89 |
| 110.9 | 6.81 | 120.6 | 24.3 | 13.64 | 2.21 | 5.30 |
| 113.7 | 6.35 | 170.0 | 24.5 | 15.38 | 2.57 | 3.03 |
| 116.4 | 5.89 | 197.7 | 24.4 | 14.97 | 4.20 | 3.65 |
| 116.7 | 5.85 | 194.5 | 24.4 | 14.91 | 3.90 | 3.80 |
| 124.6 | 5.39 | 116.0 | 24.6 | 9.47 | 2.10 | 10.08 |
| 138.5 | 4.89 | 77.0 | 24.6 | 11.10 | .97 | 9.45 |
| 138.7 | 4.90 | 79.2 | 24.5 | 11.34 | .92 | 8.86 |
| 142.8 | 4.41 | 132.5 | 24.6 | 15.23 | 1.80 | 3.64 |
| 146.0 | 3.92 | 180.2 | 24.6 | 14.12 | 4.42 | 3.87 |
| 146.5 | 3.87 | 181.6 | 24.5 | 14.06 | 3.77 | 4.09 |
| 156.1 | 3.43 | 104.5 | 23.4 | 9.47 | 2.03 | 9.96 |
| 168.2 | 3.10 | 81.3 | 23.5 | 11.71 | .80 | 8.42 |
| 170.0 | 2.92 | 102.2 | 23.4 | 12.05 | .64 | 7.20 |
| 175.8 | 2.46 | 163.1 | 23.5 | 12.12 | 1.87 | 5.65 |
| 176.5 | 2.45 | 155.2 | 23.6 | 11.55 | 1.54 | 6.81 |
| 192.6 | 2.14 | 83.4 | 24.6 | 10.08 | .80 | 10.11 |
| 195.8 | 1.94 | 115.3 | 24.7 | 10.31 | .28 | 9.61 |
| 203.4 | 1.58 | 151.8 | 24.8 | 10.77 | .56 | 8.27 |
| 213.7 | 1.47 | 89.9 | 24.9 | 8.67 | 1.03 | 11.20 |
| 215.2 | 1.44 | 88.7 | 24.9 | 9.45 | .72 | 10.62 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 225.0 | .98 | 152.6 | 25.0 | 9.30 | .22 | 11.09 |
| 225.5 | .97 | 151.8 | 25.0 | 9.64 | .35 | 10.19 |
| 234.3 | .88 | 95.9 | 25.0 | 7.42 | .88 | 12.70 |
| 246.3 | .48 | 133.4 | 25.1 | 6.80 | .59 | 13.58 |

RESULTATS (AVEC HC<0 CONSERVE)

TITRE: 13KW-1-3
FICHIER: 291011

| TEMPS MIN. | P.INI KG | P.FIN KG | INPUT MJ | OUTPUT MJ | CO gr | HC gr |
|---|---|---|---|---|---|---|
| 3.1 | 16.68 | 16.17 | 6.33 | 1.37 | 39 | 35 |
| 5.9 | 16.17 | 15.83 | 4.37 | .98 | 66 | 62 |
| 8.4 | 15.83 | 15.47 | 4.78 | 1.15 | 92 | 93 |
| 10.4 | 15.47 | 15.12 | 4.73 | .73 | 141 | 131 |
| 11.7 | 15.12 | 14.91 | 2.90 | .39 | 174 | 156 |
| 12.2 | 14.91 | 14.74 | 2.38 | .44 | 197 | 175 |
| 14.7 | 14.74 | 14.41 | 4.52 | 1.23 | 230 | 206 |
| 19.2 | 14.41 | 14.04 | 5.30 | 1.33 | 273 | 248 |
| 22.7 | 14.04 | 13.68 | 5.30 | 1.41 | 316 | 290 |
| 26.0 | 13.68 | 13.30 | 5.58 | 1.03 | 382 | 341 |
| 28.8 | 13.30 | 12.91 | 5.81 | 1.73 | 437 | 384 |
| 33.3 | 12.91 | 12.52 | 5.96 | 1.77 | 491 | 431 |
| 37.3 | 12.52 | 12.12 | 6.17 | 2.15 | 540 | 476 |
| 41.8 | 12.12 | 11.71 | 6.37 | 2.64 | 585 | 515 |
| 47.1 | 11.71 | 11.31 | 6.34 | 2.64 | 632 | 554 |
| 53.4 | 11.31 | 11.09 | 3.50 | 1.70 | 657 | 572 |
| 53.6 | 11.09 | 10.88 | 3.37 | 1.64 | 681 | 590 |
| 55.4 | 10.88 | 10.48 | 6.45 | 2.76 | 763 | 623 |
| 56.9 | 10.48 | 10.20 | 4.73 | 1.57 | 837 | 654 |
| 57.7 | 10.20 | 9.99 | 3.44 | 1.12 | 880 | 679 |
| 59.4 | 9.99 | 9.66 | 5.48 | 2.62 | 916 | 709 |
| 64.6 | 9.66 | 9.24 | 7.07 | 3.51 | 978 | 743 |
| 74.9 | 9.24 | 8.95 | 5.04 | 2.93 | 1020 | 760 |
| 78.6 | 8.95 | 8.73 | 3.87 | 2.21 | 1040 | 777 |
| 80.9 | 8.73 | 8.38 | 6.14 | 4.08 | 1096 | 789 |
| 82.9 | 8.38 | 7.95 | 7.68 | 5.18 | 1171 | 799 |
| 85.2 | 7.95 | 7.70 | 4.65 | 2.43 | 1229 | 817 |
| 85.7 | 7.70 | 7.48 | 3.99 | 2.00 | 1275 | 835 |
| 90.9 | 7.48 | 7.08 | 7.56 | 4.82 | 1335 | 854 |
| 104.8 | 7.08 | 6.82 | 5.06 | 2.98 | 1398 | 871 |
| 107.1 | 6.82 | 6.57 | 4.76 | 3.32 | 1421 | 883 |
| 110.9 | 6.57 | 6.16 | 8.11 | 6.38 | 1483 | 885 |
| 113.7 | 6.16 | 5.74 | 8.51 | 6.92 | 1551 | 879 |
| 116.4 | 5.74 | 5.51 | 4.80 | 3.18 | 1606 | 887 |
| 116.7 | 5.51 | 5.28 | 4.81 | 3.26 | 1659 | 894 |
| 124.6 | 5.28 | 4.84 | 9.51 | 7.14 | 1753 | 900 |
| 138.5 | 4.84 | 4.62 | 5.14 | 4.08 | 1775 | 907 |
| 138.7 | 4.62 | 4.39 | 5.06 | 4.34 | 1796 | 908 |
| 142.8 | 4.39 | 3.94 | 10.53 | 9.75 | 1863 | 889 |
| 146.0 | 3.94 | 3.69 | 6.02 | 4.55 | 1945 | 889 |
| 146.5 | 3.69 | 3.46 | 5.63 | 4.48 | 2015 | 885 |
| 156.1 | 3.46 | 3.10 | 9.21 | 7.67 | 2111 | 880 |
| 168.2 | 3.10 | 2.86 | 6.22 | 5.74 | 2135 | 875 |
| 170.0 | 2.86 | 2.56 | 7.97 | 8.81 | 2162 | 840 |
| 175.8 | 2.56 | 2.33 | 6.15 | 7.03 | 2221 | 796 |
| 176.5 | 2.33 | 2.18 | 4.16 | 4.56 | 2255 | 771 |
| 192.6 | 2.18 | 1.94 | 6.82 | 6.28 | 2286 | 767 |
| 195.8 | 1.94 | 1.68 | 7.72 | 8.18 | 2299 | 742 |
| 203.4 | 1.68 | 1.45 | 6.77 | 7.99 | 2324 | 697 |
| 213.7 | 1.45 | 1.39 | 1.98 | 1.87 | 2337 | 694 |
| 215.2 | 1.39 | 1.16 | 7.10 | 6.79 | 2369 | 684 |
| 225.0 | 1.16 | .93 | 7.11 | 6.68 | 2380 | 675 |
| 225.5 | .93 | .88 | 1.56 | 1.64 | 2384 | 669 |
| 234.3 | .88 | .65 | 7.57 | 6.81 | 2435 | 663 |
| 246.3 | .65 | 0.00 | 21.98 | 18.79 | 2548 | 654 |

RESULTATS (AVEC HC<0 CONSERVE)

FICHIER: 291011 13KW-1-3
NOMBRE DE POINTS DE MESURE= 55

MESURES DE CHEMINEE (100% CHARGE BRULEE)

POIDS SEC= 16.7 KG
DUREE =260 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
2548 grammes
11.6 g/MJ
588 g/Hre

HYDROCARBURES :
654 grammes
3.0 g/MJ
151 g/Hre

INPUT : 330 MJ

OUTPUT : 219 MJ

PUISSANCE: 50 MJ/Hre

RENDEMENT:66.3 %

MESURES DE CHEMINEE (91.3% CHARGE BRULEE)

POIDS SEC= 15.2 KG
DUREE =209 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
2324 grammes
13.2 g/MJ
669 g/Hre

HYDROCARBURES :
697 grammes
4.0 g/MJ
200 g/Hre

INPUT : 283 MJ

OUTPUT : 176 MJ

PUISSANCE: 51 MJ/Hre

RENDEMENT:62.3 %

MESURES AU PLENUM

| | | |
|---|---|---|
| FRACTION BRULEE | 96.1 % | 91.3 % |
| DUREE | 240 MIN | 209 MIN |
| DELTA T MOYEN | 18 C | 18 C |
| INPUT | 308 MJ | 283 MJ |
| OUTPUT | 187 MJ | 163 MJ |
| PUISSANCE: | 47 MJ/H | 47 MJ/H |
| RENDEMENT | 61 % | 58 % |

RESULTATS (AVEC HC<0 ELIMINE)

TITRE: 13KW-1-3
FICHIER: 291011

| TEMPS MIN. | P.INI KG | P.FIN KG | INPUT MJ | OUTPUT MJ | CO gr | HC gr |
|---|---|---|---|---|---|---|
| 3.1 | 16.68 | 16.17 | 6.33 | 1.37 | 39 | 35 |
| 5.9 | 16.17 | 15.83 | 4.37 | .98 | 66 | 62 |
| 8.4 | 15.83 | 15.47 | 4.78 | 1.15 | 92 | 93 |
| 10.4 | 15.47 | 15.12 | 4.73 | .73 | 141 | 131 |
| 11.7 | 15.12 | 14.91 | 2.90 | .39 | 174 | 156 |
| 12.2 | 14.91 | 14.74 | 2.38 | .44 | 197 | 175 |
| 14.7 | 14.74 | 14.41 | 4.52 | 1.23 | 230 | 206 |
| 19.2 | 14.41 | 14.04 | 5.30 | 1.33 | 273 | 248 |
| 22.7 | 14.04 | 13.68 | 5.30 | 1.41 | 316 | 290 |
| 26.0 | 13.68 | 13.30 | 5.58 | 1.03 | 382 | 341 |
| 28.8 | 13.30 | 12.91 | 5.81 | 1.73 | 437 | 384 |
| 33.3 | 12.91 | 12.52 | 5.96 | 1.77 | 491 | 431 |
| 37.3 | 12.52 | 12.12 | 6.17 | 2.15 | 540 | 476 |
| 41.8 | 12.12 | 11.71 | 6.37 | 2.64 | 585 | 515 |
| 47.1 | 11.71 | 11.31 | 6.34 | 2.64 | 632 | 554 |
| 53.4 | 11.31 | 11.09 | 3.50 | 1.70 | 657 | 572 |
| 53.6 | 11.09 | 10.88 | 3.37 | 1.64 | 681 | 590 |
| 55.4 | 10.88 | 10.48 | 6.45 | 2.76 | 763 | 623 |
| 56.9 | 10.48 | 10.20 | 4.73 | 1.57 | 837 | 654 |
| 57.7 | 10.20 | 9.99 | 3.44 | 1.12 | 880 | 679 |
| 59.4 | 9.99 | 9.66 | 5.48 | 2.62 | 916 | 709 |
| 64.6 | 9.66 | 9.24 | 7.07 | 3.51 | 978 | 743 |
| 74.9 | 9.24 | 8.95 | 5.04 | 2.93 | 1020 | 760 |
| 78.6 | 8.95 | 8.73 | 3.87 | 2.21 | 1040 | 777 |
| 80.9 | 8.73 | 8.38 | 6.14 | 4.08 | 1096 | 789 |
| 82.9 | 8.38 | 7.95 | 7.68 | 5.18 | 1171 | 799 |
| 85.2 | 7.95 | 7.70 | 4.65 | 2.43 | 1229 | 817 |
| 85.7 | 7.70 | 7.48 | 3.99 | 2.00 | 1275 | 835 |
| 90.9 | 7.48 | 7.08 | 7.56 | 4.82 | 1335 | 854 |
| 104.8 | 7.08 | 6.82 | 5.06 | 2.98 | 1398 | 871 |
| 107.1 | 6.82 | 6.57 | 4.76 | 3.32 | 1421 | 883 |
| 110.9 | 6.57 | 6.16 | 8.11 | 6.38 | 1483 | 885 |
| 113.7 | 6.16 | 5.74 | 8.51 | 6.59 | 1551 | 885 |
| 116.4 | 5.74 | 5.51 | 4.80 | 3.18 | 1606 | 893 |
| 116.7 | 5.51 | 5.28 | 4.81 | 3.26 | 1659 | 900 |
| 124.6 | 5.28 | 4.84 | 9.51 | 7.14 | 1753 | 906 |
| 138.5 | 4.84 | 4.62 | 5.14 | 4.08 | 1775 | 913 |
| 138.7 | 4.62 | 4.39 | 5.06 | 4.34 | 1796 | 914 |
| 142.8 | 4.39 | 3.94 | 10.53 | 8.67 | 1863 | 914 |
| 146.0 | 3.94 | 3.69 | 6.02 | 4.53 | 1945 | 914 |
| 146.5 | 3.69 | 3.46 | 5.63 | 4.27 | 2015 | 914 |
| 156.1 | 3.46 | 3.10 | 9.21 | 7.37 | 2111 | 914 |
| 168.2 | 3.10 | 2.86 | 6.22 | 5.51 | 2135 | 914 |
| 170.0 | 2.86 | 2.56 | 7.97 | 6.81 | 2162 | 914 |
| 175.8 | 2.56 | 2.33 | 6.15 | 4.58 | 2221 | 914 |
| 176.5 | 2.33 | 2.18 | 4.16 | 3.20 | 2255 | 914 |
| 192.6 | 2.18 | 1.94 | 6.82 | 6.05 | 2286 | 914 |
| 195.8 | 1.94 | 1.68 | 7.72 | 6.74 | 2299 | 914 |
| 203.4 | 1.68 | 1.45 | 6.77 | 5.48 | 2324 | 914 |
| 213.7 | 1.45 | 1.39 | 1.98 | 1.69 | 2337 | 914 |
| 215.2 | 1.39 | 1.16 | 7.10 | 6.26 | 2369 | 914 |
| 225.0 | 1.16 | .93 | 7.11 | 6.16 | 2380 | 914 |
| 225.5 | .93 | .88 | 1.56 | 1.32 | 2384 | 914 |
| 234.3 | .88 | .65 | 7.57 | 6.45 | 2435 | 914 |
| 246.3 | .65 | 0.00 | 21.98 | 18.34 | 2548 | 914 |

RESULTATS (AVEC HC<0 ELIMINE)

FICHIER: 291011 13KW-1-3
NOMBRE DE POINTS DE MESURE= 55

MESURES DE CHEMINEE (100% CHARGE BRULEE)

POIDS SEC= 16.7 KG
DUREE =260 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
2548 grammes
12.5 g/MJ
588 g/Hre

HYDROCARBURES :
914 grammes
4.5 g/MJ
211 g/Hre

INPUT : 330 MJ

OUTPUT : 204 MJ

PUISSANCE: 47 MJ/Hre

RENDEMENT:61.9 %

MESURES DE CHEMINEE (91.3% CHARGE BRULEE)

POIDS SEC= 15.2 KG
DUREE =209 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
2324 grammes
14.2 g/MJ
669 g/Hre

HYDROCARBURES :
914 grammes
5.6 g/MJ
263 g/Hre

INPUT : 283 MJ

OUTPUT : 164 MJ

PUISSANCE: 47 MJ/Hre

RENDEMENT:58.0 %

MESURES AU PLENUM

| | | |
|---|---|---|
| FRACTION BRULEE | 96.1 % | 91.3 % |
| DUREE | 240 MIN | 209 MIN |
| DELTA T MOYEN | 18 C | 18 C |
| INPUT | 308 MJ | 283 MJ |
| OUTPUT | 187 MJ | 163 MJ |
| PUISSANCE: | 47 MJ/H | 47 MJ/H |
| RENDEMENT | 61 % | 58 % |

# MESURES

FICHIER: 301014
TITRE: 13 KW-2-3
POIDS INITIAL (BASE HUMIDE)=20.67KG
HUMIDITE DU BOIS=15%
POIDS INTIAL (BASE SECHE)17.57KG
INTERVALLE DE LECTURE (%) 2.5
NBRE. DE LECTURES AU CHANGEMENT D'ETAT 1

| TEMPS MIN. | POIDS KG | T.CH. C | T.AMB C | CO2 % | CO % | O2 % |
|---|---|---|---|---|---|---|
| 2.2 | 20.15 | 108.1 | 23.0 | 12.77 | 3.17 | 6.91 |
| 4.2 | 19.56 | 137.9 | 23.6 | 13.89 | 4.24 | 5.48 |
| 5.7 | 19.05 | 156.5 | 23.8 | 14.27 | 5.51 | 4.81 |
| 6.9 | 18.58 | 168.4 | 23.4 | 14.74 | 5.76 | 4.12 |
| 8.4 | 17.98 | 182.3 | 22.3 | 15.02 | 7.46 | 3.76 |
| 9.4 | 17.63 | 185.0 | 23.2 | 15.62 | 4.67 | 3.78 |
| 9.9 | 17.54 | 179.0 | 23.5 | 15.18 | 3.95 | 4.25 |
| 13.5 | 17.05 | 147.5 | 24.1 | 13.06 | 2.89 | 6.58 |
| 17.2 | 16.53 | 132.4 | 23.6 | 14.74 | 4.71 | 4.59 |
| 20.7 | 15.98 | 124.4 | 23.8 | 15.76 | 5.47 | 3.74 |
| 23.5 | 15.50 | 122.2 | 24.0 | 16.07 | 5.61 | 3.38 |
| 26.5 | 14.97 | 122.4 | 23.7 | 15.72 | 5.92 | 3.56 |
| 29.6 | 14.43 | 123.5 | 22.2 | 15.03 | 6.44 | 3.88 |
| 32.3 | 13.94 | 126.7 | 21.8 | 15.40 | 6.44 | 3.55 |
| 35.1 | 13.38 | 130.4 | 20.5 | 15.43 | 5.68 | 3.59 |
| 37.9 | 12.90 | 132.4 | 19.7 | 15.51 | 5.49 | 3.56 |
| 40.9 | 12.40 | 134.5 | 19.6 | 15.67 | 5.29 | 3.47 |
| 44.1 | 11.84 | 134.6 | 18.8 | 15.99 | 6.22 | 3.29 |
| 46.9 | 11.34 | 129.2 | 19.0 | 16.18 | 5.65 | 3.18 |
| 49.9 | 10.84 | 124.7 | 19.1 | 16.15 | 5.07 | 3.12 |
| 52.9 | 10.34 | 122.1 | 18.7 | 16.14 | 5.57 | 3.12 |
| 56.5 | 9.81 | 119.6 | 18.2 | 15.93 | 4.97 | 3.34 |
| 60.2 | 9.29 | 115.7 | 18.4 | 15.69 | 3.97 | 3.36 |
| 64.9 | 8.74 | 110.8 | 18.9 | 15.50 | 3.83 | 3.42 |
| 69.1 | 8.26 | 108.4 | 18.6 | 15.51 | 3.75 | 3.55 |
| 74.4 | 7.74 | 105.8 | 18.5 | 14.74 | 3.31 | 3.75 |
| 80.7 | 7.23 | 100.2 | 18.8 | 13.19 | 2.34 | 6.09 |
| 89.6 | 6.71 | 91.8 | 18.5 | 11.09 | 2.00 | 8.06 |
| 95.7 | 6.43 | 88.0 | 22.2 | 13.48 | .91 | 6.49 |
| 97.4 | 6.18 | 114.3 | 22.5 | 14.75 | 1.45 | 3.17 |
| 100.5 | 5.65 | 159.0 | 23.0 | 13.34 | 5.76 | 2.70 |
| 101.0 | 5.59 | 161.4 | 22.8 | 13.79 | 4.96 | 3.05 |
| 107.2 | 5.16 | 118.7 | 20.2 | 11.18 | 2.36 | 7.81 |
| 121.5 | 4.63 | 82.8 | 19.5 | 9.18 | 2.04 | 10.39 |
| 123.3 | 4.56 | 82.9 | 18.4 | 12.06 | .77 | 7.80 |
| 128.3 | 4.09 | 138.4 | 22.2 | 13.38 | .48 | 5.88 |
| 131.3 | 3.86 | 161.5 | 23.0 | 13.69 | 1.60 | 4.43 |
| 139.4 | 3.61 | 108.5 | 23.1 | 12.27 | 1.07 | 7.23 |
| 150.7 | 3.35 | 86.1 | 23.9 | 12.16 | .58 | 8.17 |
| 154.8 | 3.09 | 130.9 | 24.2 | 11.86 | .24 | 7.90 |
| 158.5 | 2.91 | 146.4 | 24.3 | 10.67 | .60 | 8.55 |
| 170.4 | 2.71 | 87.8 | 24.5 | 10.66 | .84 | 9.58 |
| 172.7 | 2.56 | 110.4 | 24.5 | 10.85 | .31 | 9.24 |
| 178.9 | 2.30 | 135.9 | 24.7 | 9.70 | .98 | 9.99 |
| 187.9 | 2.19 | 90.4 | 24.7 | 9.58 | .77 | 10.95 |
| 190.2 | 2.03 | 109.5 | 24.6 | 10.24 | .47 | 10.17 |
| 196.4 | 1.78 | 140.0 | 24.8 | 9.72 | .70 | 9.98 |
| 206.0 | 1.63 | 91.7 | 24.8 | 8.83 | .74 | 11.43 |
| 207.8 | 1.55 | 104.9 | 24.8 | 8.98 | .52 | 11.35 |
| 217.6 | 1.18 | 134.2 | 24.8 | 8.86 | .68 | 11.00 |
| 223.6 | 1.13 | 97.5 | 25.0 | 7.80 | .82 | 12.58 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 225.9 | 1.01 | 110.8 | 25.0 | 7.83 | .50 | 12.60 |
| 243.6 | .51 | 126.2 | 25.0 | 6.03 | .65 | 14.48 |

RESULTATS (AVEC HC<0 CONSERVE)

TITRE: 13 KW-2-3
FICHIER: 301014

| TEMPS MIN. | P.INI KG | P.FIN KG | INPUT MJ | OUTPUT MJ | CO gr | HC gr |
|---|---|---|---|---|---|---|
| 2.2 | 17.57 | 17.02 | 6.87 | 1.39 | 63 | 39 |
| 4.2 | 17.02 | 16.64 | 4.85 | .84 | 114 | 72 |
| 5.7 | 16.64 | 16.30 | 4.53 | .61 | 169 | 107 |
| 6.9 | 16.30 | 15.92 | 5.19 | .76 | 233 | 147 |
| 8.4 | 15.92 | 15.57 | 4.78 | .43 | 299 | 191 |
| 9.4 | 15.57 | 15.41 | 2.24 | .42 | 322 | 209 |
| 9.9 | 15.41 | 15.19 | 3.04 | .68 | 350 | 233 |
| 13.5 | 15.19 | 14.81 | 5.44 | 1.50 | 395 | 272 |
| 17.2 | 14.81 | 14.40 | 5.94 | 1.32 | 457 | 322 |
| 20.7 | 14.40 | 14.00 | 5.89 | 1.19 | 521 | 375 |
| 23.5 | 14.00 | 13.61 | 5.95 | 1.27 | 585 | 429 |
| 26.5 | 13.61 | 13.18 | 6.47 | 1.42 | 659 | 488 |
| 29.6 | 13.18 | 12.77 | 6.35 | 1.43 | 739 | 544 |
| 32.3 | 12.77 | 12.34 | 6.69 | 1.62 | 821 | 602 |
| 35.1 | 12.34 | 11.91 | 6.84 | 1.96 | 900 | 657 |
| 37.9 | 11.91 | 11.50 | 6.58 | 2.04 | 974 | 708 |
| 40.9 | 11.50 | 11.05 | 7.18 | 2.40 | 1052 | 762 |
| 44.1 | 11.05 | 10.60 | 7.43 | 2.32 | 1139 | 820 |
| 46.9 | 10.60 | 10.17 | 7.20 | 2.56 | 1219 | 873 |
| 49.9 | 10.17 | 9.74 | 7.35 | 3.01 | 1296 | 920 |
| 52.9 | 9.74 | 9.29 | 7.71 | 3.16 | 1383 | 970 |
| 56.5 | 9.29 | 8.83 | 8.08 | 3.71 | 1469 | 1016 |
| 60.2 | 8.83 | 8.36 | 8.52 | 4.71 | 1551 | 1051 |
| 64.9 | 8.36 | 7.90 | 8.38 | 5.00 | 1631 | 1079 |
| 69.1 | 7.90 | 7.45 | 8.41 | 5.16 | 1712 | 1106 |
| 74.4 | 7.45 | 6.99 | 8.88 | 6.36 | 1797 | 1117 |
| 80.7 | 6.99 | 6.53 | 9.13 | 6.73 | 1870 | 1128 |
| 89.6 | 6.53 | 6.16 | 7.44 | 6.02 | 1933 | 1126 |
| 95.7 | 6.16 | 5.92 | 5.01 | 4.24 | 1950 | 1127 |
| 97.4 | 5.92 | 5.56 | 7.47 | 7.96 | 1993 | 1091 |
| 100.5 | 5.56 | 5.29 | 5.86 | 4.72 | 2098 | 1078 |
| 101.0 | 5.29 | 5.07 | 4.97 | 3.96 | 2174 | 1071 |
| 107.2 | 5.07 | 4.62 | 10.04 | 8.31 | 2275 | 1062 |
| 121.5 | 4.62 | 4.34 | 6.50 | 5.18 | 2342 | 1063 |
| 123.3 | 4.34 | 4.09 | 5.85 | 5.53 | 2363 | 1055 |
| 128.3 | 4.09 | 3.76 | 7.97 | 8.54 | 2381 | 1022 |
| 131.3 | 3.76 | 3.54 | 5.59 | 6.02 | 2420 | 992 |
| 139.4 | 3.54 | 3.30 | 5.99 | 5.80 | 2450 | 979 |
| 150.7 | 3.30 | 3.06 | 6.27 | 5.77 | 2467 | 976 |
| 154.8 | 3.06 | 2.85 | 5.51 | 5.85 | 2474 | 957 |
| 158.5 | 2.85 | 2.67 | 4.85 | 5.43 | 2492 | 930 |
| 170.4 | 2.67 | 2.51 | 4.50 | 4.05 | 2511 | 928 |
| 172.7 | 2.51 | 2.31 | 5.41 | 5.46 | 2521 | 916 |
| 178.9 | 2.31 | 2.14 | 4.90 | 4.69 | 2550 | 904 |
| 187.9 | 2.14 | 2.01 | 3.60 | 3.07 | 2565 | 907 |
| 190.2 | 2.01 | 1.82 | 5.69 | 5.21 | 2581 | 904 |
| 196.4 | 1.82 | 1.62 | 5.73 | 5.78 | 2607 | 886 |
| 206.0 | 1.62 | 1.52 | 3.29 | 2.99 | 2622 | 884 |
| 207.8 | 1.52 | 1.30 | 6.47 | 6.00 | 2645 | 879 |
| 217.6 | 1.30 | 1.11 | 6.25 | 6.16 | 2674 | 862 |
| 223.6 | 1.11 | 1.03 | 2.52 | 2.14 | 2689 | 863 |
| 225.9 | 1.03 | .73 | 9.56 | 8.58 | 2725 | 859 |
| 243.6 | .73 | 0.00 | 24.58 | 19.56 | 2874 | 874 |

RESULTATS (AVEC HC<0 CONSERVE)

FICHIER: 301014 13 KW-2-3
NOMBRE DE POINTS DE MESURE= 53

MESURES DE CHEMINEE (100% CHARGE BRULEE)

POIDS SEC= 17.6 KG
DUREE =251 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
2874 grammes
13.0 g/MJ
687 g/Hre

HYDROCARBURES :
874 grammes
4.0 g/MJ
209 g/Hre

INPUT : 348 MJ

OUTPUT : 221 MJ

PUISSANCE: 53 MJ/Hre

RENDEMENT:63.6 %

MESURES DE CHEMINEE (90.8% CHARGE BRULEE)

POIDS SEC= 15.9 KG
DUREE =201 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
2607 grammes
14.8 g/MJ
777 g/Hre

HYDROCARBURES :
886 grammes
5.0 g/MJ
264 g/Hre

INPUT : 295 MJ

OUTPUT : 176 MJ

PUISSANCE: 52 MJ/Hre

RENDEMENT:59.5 %

MESURES AU PLENUM

| | | |
|---|---|---|
| FRACTION BRULEE | 95.9 % | 90.8 % |
| DUREE | 235 MIN | 201 MIN |
| DELTA T MOYEN | 18 C | 18 C |
| INPUT | 323 MJ | 295 MJ |
| OUTPUT | 183 MJ | 157 MJ |
| PUISSANCE: | 47 MJ/H | 47 MJ/H |
| RENDEMENT | 57 % | 53 % |

RESULTATS (AVEC HC<0 ELIMINE)

TITRE: 13 KW-2-3
FICHIER: 301014

| TEMPS MIN. | P.INI KG | P.FIN KG | INPUT MJ | OUTPUT MJ | CO gr | HC gr |
|---|---|---|---|---|---|---|
| 2.2 | 17.57 | 17.02 | 6.87 | 1.39 | 63 | 39 |
| 4.2 | 17.02 | 16.64 | 4.85 | .84 | 114 | 72 |
| 5.7 | 16.64 | 16.30 | 4.53 | .61 | 169 | 107 |
| 6.9 | 16.30 | 15.92 | 5.19 | .76 | 233 | 147 |
| 8.4 | 15.92 | 15.57 | 4.78 | .43 | 299 | 191 |
| 9.4 | 15.57 | 15.41 | 2.24 | .42 | 322 | 209 |
| 9.9 | 15.41 | 15.19 | 3.04 | .68 | 350 | 233 |
| 13.5 | 15.19 | 14.81 | 5.44 | 1.50 | 395 | 272 |
| 17.2 | 14.81 | 14.40 | 5.94 | 1.32 | 457 | 322 |
| 20.7 | 14.40 | 14.00 | 5.89 | 1.19 | 521 | 375 |
| 23.5 | 14.00 | 13.61 | 5.95 | 1.27 | 585 | 429 |
| 26.5 | 13.61 | 13.18 | 6.47 | 1.42 | 659 | 488 |
| 29.6 | 13.18 | 12.77 | 6.35 | 1.43 | 739 | 544 |
| 32.3 | 12.77 | 12.34 | 6.69 | 1.62 | 821 | 602 |
| 35.1 | 12.34 | 11.91 | 6.84 | 1.96 | 900 | 657 |
| 37.9 | 11.91 | 11.50 | 6.58 | 2.04 | 974 | 708 |
| 40.9 | 11.50 | 11.05 | 7.18 | 2.40 | 1052 | 762 |
| 44.1 | 11.05 | 10.60 | 7.43 | 2.32 | 1139 | 820 |
| 46.9 | 10.60 | 10.17 | 7.20 | 2.56 | 1219 | 873 |
| 49.9 | 10.17 | 9.74 | 7.35 | 3.01 | 1296 | 920 |
| 52.9 | 9.74 | 9.29 | 7.71 | 3.16 | 1383 | 970 |
| 56.5 | 9.29 | 8.83 | 8.08 | 3.71 | 1469 | 1016 |
| 60.2 | 8.83 | 8.36 | 8.52 | 4.71 | 1551 | 1051 |
| 64.9 | 8.36 | 7.90 | 8.38 | 5.00 | 1631 | 1079 |
| 69.1 | 7.90 | 7.45 | 8.41 | 5.16 | 1712 | 1106 |
| 74.4 | 7.45 | 6.99 | 8.88 | 6.36 | 1797 | 1117 |
| 80.7 | 6.99 | 6.53 | 9.13 | 6.73 | 1870 | 1128 |
| 89.6 | 6.53 | 6.16 | 7.44 | 5.91 | 1933 | 1128 |
| 95.7 | 6.16 | 5.92 | 5.01 | 4.24 | 1950 | 1129 |
| 97.4 | 5.92 | 5.56 | 7.47 | 5.93 | 1993 | 1129 |
| 100.5 | 5.56 | 5.29 | 5.86 | 4.01 | 2098 | 1129 |
| 101.0 | 5.29 | 5.07 | 4.97 | 3.54 | 2174 | 1129 |
| 107.2 | 5.07 | 4.62 | 10.04 | 7.85 | 2275 | 1129 |
| 121.5 | 4.62 | 4.34 | 6.50 | 5.18 | 2342 | 1130 |
| 123.3 | 4.34 | 4.09 | 5.85 | 5.07 | 2363 | 1130 |
| 128.3 | 4.09 | 3.76 | 7.97 | 6.68 | 2381 | 1130 |
| 131.3 | 3.76 | 3.54 | 5.59 | 4.34 | 2420 | 1130 |
| 139.4 | 3.54 | 3.30 | 5.99 | 5.08 | 2450 | 1130 |
| 150.7 | 3.30 | 3.06 | 6.27 | 5.62 | 2467 | 1130 |
| 154.8 | 3.06 | 2.85 | 5.51 | 4.75 | 2474 | 1130 |
| 158.5 | 2.85 | 2.67 | 4.85 | 3.92 | 2492 | 1130 |
| 170.4 | 2.67 | 2.51 | 4.50 | 3.98 | 2511 | 1130 |
| 172.7 | 2.51 | 2.31 | 5.41 | 4.77 | 2521 | 1130 |
| 178.9 | 2.31 | 2.14 | 4.90 | 4.03 | 2550 | 1130 |
| 187.9 | 2.14 | 2.01 | 3.60 | 3.07 | 2565 | 1133 |
| 190.2 | 2.01 | 1.82 | 5.69 | 5.06 | 2581 | 1133 |
| 196.4 | 1.82 | 1.62 | 5.73 | 4.76 | 2607 | 1133 |
| 206.0 | 1.62 | 1.52 | 3.29 | 2.90 | 2622 | 1133 |
| 207.8 | 1.52 | 1.30 | 6.47 | 5.71 | 2645 | 1133 |
| 217.6 | 1.30 | 1.11 | 6.25 | 5.21 | 2674 | 1133 |
| 223.6 | 1.11 | 1.03 | 2.52 | 2.14 | 2689 | 1134 |
| 225.9 | 1.03 | .73 | 9.56 | 8.34 | 2725 | 1134 |
| 243.6 | .73 | 0.00 | 24.58 | 19.56 | 2874 | 1149 |

RESULTATS (AVEC HC<0 ELIMINE)

FICHIER: 301014 13 KW-2-3
NOMBRE DE POINTS DE MESURE= 53

MESURES DE CHEMINEE (100% CHARGE BRULEE)

POIDS SEC= 17.6 KG
DUREE =251 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
2874 grammes
14.0 g/MJ
687 g/Hre

HYDROCARBURES :
1149 grammes
5.6 g/MJ
275 g/Hre

INPUT : 348 MJ

OUTPUT : 206 MJ

PUISSANCE: 49 MJ/Hre

RENDEMENT:59.1 %

MESURES DE CHEMINEE (90.8% CHARGE BRULEE)

POIDS SEC= 15.9 KG
DUREE =201 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
2607 grammes
16.1 g/MJ
777 g/Hre

HYDROCARBURES :
1133 grammes
7.0 g/MJ
338 g/Hre

INPUT : 295 MJ

OUTPUT : 162 MJ

PUISSANCE: 48 MJ/Hre

RENDEMENT:54.8 %

MESURES AU PLENUM

| | | |
|---|---|---|
| FRACTION BRULEE | 95.9 % | 90.8 % |
| DUREE | 235 MIN | 201 MIN |
| DELTA T MOYEN | 18 C | 18 C |
| INPUT | 323 MJ | 295 MJ |
| OUTPUT | 183 MJ | 157 MJ |
| PUISSANCE: | 47 MJ/H | 47 MJ/H |
| RENDEMENT | 57 % | 53 % |

MESURES

FICHIER: 251012
TITRE: LOW POWER-2-3
POIDS INITIAL (BASE HUMIDE)=19.32KG
HUMIDITE DU BOIS=15%
POIDS INTIAL (BASE SECHE)16.42KG
INTERVALLE DE LECTURE [%] 2.5
NBRE. DE LECTURES AU CHANGEMENT D'ETAT 1

| TEMPS MIN. | POIDS KG | T.CH. C | T.AMB C | CO2 % | CO % | O2 % |
|---|---|---|---|---|---|---|
| 2.9 | 18.76 | 96.3 | 24.9 | -.02 | .66 | 14.64 |
| 4.8 | 18.27 | 121.4 | 25.0 | .00 | .82 | 14.72 |
| 6.6 | 17.85 | 138.1 | 25.1 | 5.49 | 2.06 | 11.18 |
| 7.3 | 17.81 | 131.0 | 25.1 | 7.87 | 1.57 | 11.83 |
| 17.3 | 17.36 | 71.0 | 25.2 | 7.48 | 1.60 | 12.26 |
| 29.8 | 16.90 | 59.0 | 25.1 | 9.64 | 2.43 | 9.97 |
| 35.5 | 16.37 | 73.2 | 25.2 | 14.81 | 5.56 | 4.04 |
| 39.2 | 15.89 | 80.1 | 25.1 | 9.37 | 2.10 | 10.19 |
| 47.4 | 15.45 | 69.2 | 25.2 | 8.88 | 1.49 | 10.81 |
| 57.4 | 14.96 | 66.4 | 25.2 | 9.36 | 1.70 | 10.41 |
| 65.8 | 14.45 | 70.3 | 25.4 | 11.55 | 2.30 | 8.01 |
| 72.0 | 14.00 | 74.8 | 25.3 | 9.48 | 2.27 | 9.95 |
| 81.4 | 13.50 | 70.5 | 25.2 | 9.19 | 2.38 | 10.09 |
| 91.5 | 13.02 | 67.9 | 24.6 | 9.52 | 2.37 | 9.79 |
| 100.2 | 12.55 | 69.4 | 24.2 | 9.84 | 2.56 | 9.18 |
| 109.0 | 12.04 | 70.8 | 24.6 | 11.28 | 2.79 | 7.85 |
| 114.6 | 11.56 | 79.0 | 21.0 | 14.78 | 4.00 | 4.31 |
| 119.0 | 11.05 | 86.8 | 22.2 | 16.49 | 6.18 | 2.74 |
| 121.8 | 10.61 | 90.4 | 23.8 | 16.51 | 5.73 | 2.79 |
| 125.5 | 10.05 | 91.2 | 23.6 | 15.04 | 4.48 | 4.12 |
| 129.3 | 9.61 | 90.7 | 23.9 | 12.66 | 3.76 | 6.57 |
| 134.9 | 9.14 | 85.6 | 24.8 | 13.47 | 2.72 | 5.66 |
| 140.6 | 8.67 | 85.3 | 25.2 | 13.71 | 2.70 | 5.44 |
| 146.3 | 8.19 | 85.7 | 25.2 | 13.38 | 2.37 | 5.91 |
| 153.2 | 7.70 | 85.0 | 25.5 | 13.39 | 2.30 | 5.88 |
| 160.1 | 7.22 | 85.5 | 25.5 | 13.29 | 2.29 | 6.09 |
| 167.0 | 6.74 | 86.6 | 25.6 | 13.26 | 2.40 | 5.83 |
| 173.9 | 6.27 | 86.5 | 25.4 | 13.68 | 2.48 | 5.65 |
| 181.7 | 5.74 | 86.4 | 23.5 | 13.87 | 2.11 | 5.24 |
| 189.2 | 5.29 | 86.1 | 25.4 | 13.21 | 1.87 | 5.70 |
| 198.0 | 4.82 | 85.2 | 25.6 | 12.94 | 1.92 | 6.31 |
| 209.3 | 4.31 | 82.1 | 25.7 | 11.86 | 1.38 | 7.00 |
| 223.2 | 3.85 | 74.2 | 25.7 | 8.93 | 1.82 | 9.96 |
| 250.4 | 3.38 | 62.7 | 25.6 | 8.74 | 1.88 | 9.80 |
| 281.2 | 2.89 | 61.9 | 25.2 | 8.96 | 2.08 | 9.45 |
| 314.8 | 2.41 | 60.0 | 22.2 | 8.09 | 1.76 | 10.94 |
| 348.7 | 1.92 | 57.9 | 21.2 | 8.53 | 1.55 | 10.75 |
| 383.5 | 1.45 | 55.7 | 24.6 | 7.78 | 1.33 | 11.02 |
| 423.4 | .96 | 53.0 | 24.9 | 7.37 | 1.55 | 11.39 |
| 474.9 | .48 | 48.1 | 25.0 | 5.88 | 1.66 | 13.25 |

RESULTATS (AVEC HC<0 CONSERVE)

TITRE: LOW POWER-2-3
FICHIER: 251012

| TEMPS MIN. | P.INI KG | P.FIN KG | INPUT MJ | OUTPUT MJ | CO gr | HC gr |
|---|---|---|---|---|---|---|
| 2.9 | 16.42 | 15.88 | 6.75 | -6.82 | -31 | 234 |
| 4.8 | 15.88 | 15.57 | 4.04 | -4.04 | -56 | 379 |
| 6.6 | 15.57 | 15.41 | 2.11 | 2.96 | 1 | 330 |
| 7.3 | 15.41 | 15.23 | 2.27 | .74 | 20 | 340 |
| 17.3 | 15.23 | 14.91 | 4.40 | 1.61 | 58 | 360 |
| 29.8 | 14.91 | 14.55 | 4.98 | 1.57 | 105 | 392 |
| 35.5 | 14.55 | 14.17 | 5.24 | 1.14 | 167 | 434 |
| 39.2 | 14.17 | 13.83 | 4.93 | 1.77 | 210 | 464 |
| 47.4 | 13.83 | 13.47 | 5.15 | 2.22 | 246 | 490 |
| 57.4 | 13.47 | 13.08 | 5.74 | 2.32 | 288 | 525 |
| 65.8 | 13.08 | 12.71 | 5.66 | 2.21 | 332 | 561 |
| 72.0 | 12.71 | 12.33 | 5.74 | 2.31 | 384 | 595 |
| 81.4 | 12.33 | 11.93 | 6.11 | 2.61 | 444 | 629 |
| 91.5 | 11.93 | 11.54 | 6.05 | 2.67 | 501 | 662 |
| 100.2 | 11.54 | 11.14 | 6.39 | 3.06 | 565 | 692 |
| 109.0 | 11.14 | 10.72 | 6.63 | 3.09 | 627 | 727 |
| 114.6 | 10.72 | 10.31 | 6.72 | 2.83 | 692 | 770 |
| 119.0 | 10.31 | 9.91 | 6.60 | 2.23 | 768 | 821 |
| 121.8 | 9.91 | 9.48 | 7.16 | 2.66 | 847 | 873 |
| 125.5 | 9.48 | 9.05 | 7.35 | 3.33 | 923 | 916 |
| 129.3 | 9.05 | 8.65 | 6.89 | 3.38 | 996 | 951 |
| 134.9 | 8.65 | 8.24 | 7.30 | 4.48 | 1056 | 974 |
| 140.6 | 8.24 | 7.82 | 7.54 | 4.80 | 1118 | 996 |
| 146.3 | 7.82 | 7.39 | 7.86 | 5.30 | 1177 | 1015 |
| 153.2 | 7.39 | 6.95 | 8.17 | 5.78 | 1239 | 1029 |
| 160.1 | 6.95 | 6.52 | 8.39 | 6.03 | 1303 | 1044 |
| 167.0 | 6.52 | 6.09 | 8.46 | 6.45 | 1372 | 1051 |
| 173.9 | 6.09 | 5.64 | 9.21 | 6.90 | 1446 | 1062 |
| 181.7 | 5.64 | 5.19 | 9.44 | 7.85 | 1516 | 1061 |
| 189.2 | 5.19 | 4.76 | 9.18 | 8.32 | 1582 | 1047 |
| 198.0 | 4.76 | 4.31 | 10.17 | 8.82 | 1657 | 1040 |
| 209.3 | 4.31 | 3.86 | 10.51 | 10.80 | 1726 | 1002 |
| 223.2 | 3.86 | 3.43 | 10.58 | 10.42 | 1840 | 965 |
| 250.4 | 3.43 | 2.97 | 11.41 | 12.28 | 1976 | 904 |
| 281.2 | 2.97 | 2.52 | 11.99 | 12.81 | 2129 | 842 |
| 314.8 | 2.52 | 2.06 | 12.74 | 12.79 | 2280 | 795 |
| 348.7 | 2.06 | 1.60 | 13.25 | 13.11 | 2413 | 757 |
| 383.5 | 1.60 | 1.15 | 13.83 | 16.70 | 2563 | 655 |
| 423.4 | 1.15 | .69 | 14.83 | 17.30 | 2755 | 555 |
| 474.9 | .69 | 0.00 | 23.19 | 24.10 | 3120 | 447 |

RESULTATS (AVEC HC<0 CONSERVE)

FICHIER: 251012 LOW POWER-2-3
NOMBRE DE POINTS DE MESURE= 40

MESURES DE CHEMINEE (100% CHARGE BRULEE)

POIDS SEC= 16.4 KG
DUREE =510 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
3120 grammes
13.6 g/MJ
367 g/Hre
HYDROCARBURES :
447 grammes
2.0 g/MJ
53 g/Hre

INPUT : 325 MJ

OUTPUT : 229 MJ

PUISSANCE: 27 MJ/Hre

RENDEMENT:70.4 %

MESURES DE CHEMINEE (90.2% CHARGE BRULEE)

POIDS SEC= 14.8 KG
DUREE =366 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
2413 grammes
14.1 g/MJ
396 g/Hre
HYDROCARBURES :
757 grammes
4.4 g/MJ
124 g/Hre

INPUT : 273 MJ

OUTPUT : 171 MJ

PUISSANCE: 28 MJ/Hre

RENDEMENT:62.5 %

MESURES AU PLENUM

| | | |
|---|---|---|
| FRACTION BRULEE | 95.8 % | 90.2 % |
| DUREE | 449 MIN | 366 MIN |
| DELTA T MOYEN | 11 C | 11 C |
| INPUT | 302 MJ | 273 MJ |
| OUTPUT | 195 MJ | 172 MJ |
| PUISSANCE: | 26 MJ/H | 28 MJ/H |
| RENDEMENT | 65 % | 63 % |

RESULTATS (AVEC HC<0 ELIMINE)

TITRE: LOW POWER-2-3
FICHIER: 251012

| TEMPS MIN. | P.INI KG | P.FIN KG | INPUT MJ | OUTPUT MJ | CO gr | HC gr |
|---|---|---|---|---|---|---|
| 2.9 | 16.42 | 15.88 | 6.75 | -6.82 | -31 | 234 |
| 4.8 | 15.88 | 15.57 | 4.04 | -4.04 | -56 | 379 |
| 6.6 | 15.57 | 15.41 | 2.11 | .22 | 1 | 379 |
| 7.3 | 15.41 | 15.23 | 2.27 | .74 | 20 | 389 |
| 17.3 | 15.23 | 14.91 | 4.40 | 1.61 | 58 | 409 |
| 29.8 | 14.91 | 14.55 | 4.98 | 1.57 | 105 | 441 |
| 35.5 | 14.55 | 14.17 | 5.24 | 1.14 | 167 | 483 |
| 39.2 | 14.17 | 13.83 | 4.93 | 1.77 | 210 | 513 |
| 47.4 | 13.83 | 13.47 | 5.15 | 2.22 | 246 | 539 |
| 57.4 | 13.47 | 13.08 | 5.74 | 2.32 | 288 | 574 |
| 65.8 | 13.08 | 12.71 | 5.66 | 2.21 | 332 | 610 |
| 72.0 | 12.71 | 12.33 | 5.74 | 2.31 | 384 | 644 |
| 81.4 | 12.33 | 11.93 | 6.11 | 2.61 | 444 | 678 |
| 91.5 | 11.93 | 11.54 | 6.05 | 2.67 | 501 | 711 |
| 100.2 | 11.54 | 11.14 | 6.39 | 3.06 | 565 | 741 |
| 109.0 | 11.14 | 10.72 | 6.63 | 3.09 | 627 | 776 |
| 114.6 | 10.72 | 10.31 | 6.72 | 2.83 | 692 | 819 |
| 119.0 | 10.31 | 9.91 | 6.60 | 2.23 | 768 | 870 |
| 121.8 | 9.91 | 9.48 | 7.16 | 2.66 | 847 | 922 |
| 125.5 | 9.48 | 9.05 | 7.35 | 3.33 | 923 | 965 |
| 129.3 | 9.05 | 8.65 | 6.89 | 3.38 | 996 | 1000 |
| 134.9 | 8.65 | 8.24 | 7.30 | 4.48 | 1056 | 1023 |
| 140.6 | 8.24 | 7.82 | 7.54 | 4.80 | 1118 | 1045 |
| 146.3 | 7.82 | 7.39 | 7.86 | 5.30 | 1177 | 1064 |
| 153.2 | 7.39 | 6.95 | 8.17 | 5.78 | 1239 | 1078 |
| 160.1 | 6.95 | 6.52 | 8.39 | 6.03 | 1303 | 1093 |
| 167.0 | 6.52 | 6.09 | 8.46 | 6.45 | 1372 | 1100 |
| 173.9 | 6.09 | 5.64 | 9.21 | 6.90 | 1446 | 1111 |
| 181.7 | 5.64 | 5.19 | 9.44 | 7.78 | 1516 | 1111 |
| 189.2 | 5.19 | 4.76 | 9.18 | 7.54 | 1582 | 1111 |
| 198.0 | 4.76 | 4.31 | 10.17 | 8.46 | 1657 | 1111 |
| 209.3 | 4.31 | 3.86 | 10.51 | 8.67 | 1726 | 1111 |
| 223.2 | 3.86 | 3.43 | 10.58 | 8.34 | 1840 | 1111 |
| 250.4 | 3.43 | 2.97 | 11.41 | 8.88 | 1976 | 1111 |
| 281.2 | 2.97 | 2.52 | 11.99 | 9.32 | 2129 | 1111 |
| 314.8 | 2.52 | 2.06 | 12.74 | 10.19 | 2280 | 1111 |
| 348.7 | 2.06 | 1.60 | 13.25 | 10.98 | 2413 | 1111 |
| 383.5 | 1.60 | 1.15 | 13.83 | 11.06 | 2563 | 1111 |
| 423.4 | 1.15 | .69 | 14.83 | 11.69 | 2755 | 1111 |
| 474.9 | .69 | 0.00 | 23.19 | 18.09 | 3120 | 1111 |

RESULTATS (AVEC HC<0 ELIMINE)

FICHIER: 251012 LOW POWER-2-3
NOMBRE DE POINTS DE MESURE= 40

MESURES DE CHEMINEE (100% CHARGE BRULEE)

POIDS SEC= 16.4 KG
DUREE =510 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
3120 grammes
16.3 g/MJ
367 g/Hre

HYDROCARBURES :
1111 grammes
5.8 g/MJ
131 g/Hre

INPUT : 325 MJ

OUTPUT : 192 MJ

PUISSANCE: 23 MJ/Hre

RENDEMENT:59.0 %

MESURES DE CHEMINEE (90.2% CHARGE BRULEE)

POIDS SEC= 14.8 KG
DUREE =366 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
2413 grammes
16.0 g/MJ
396 g/Hre

HYDROCARBURES :
1111 grammes
7.4 g/MJ
182 g/Hre

INPUT : 273 MJ

OUTPUT : 151 MJ

PUISSANCE: 25 MJ/Hre

RENDEMENT:55.3 %

MESURES AU PLENUM

| | | |
|---|---|---|
| FRACTION BRULEE | 95.8 % | 90.2 % |
| DUREE | 449 MIN | 366 MIN |
| DELTA T MOYEN | 11 C | 11 C |
| INPUT | 302 MJ | 273 MJ |
| OUTPUT | 195 MJ | 172 MJ |
| PUISSANCE: | 26 MJ/H | 28 MJ/H |
| RENDEMENT | 65 % | 63 % |

# MESURES

FICHIER: 311012
TITRE: 0 POWER-2-3
POIDS INITIAL (BASE HUMIDE)=16.30KG
HUMIDITE DU BOIS=15%
POIDS INTIAL (BASE SECHE)13.86KG
INTERVALLE DE LECTURE [%] 2.5
NBRE. DE LECTURES AU CHANGEMENT D'ETAT 1

| TEMPS MIN. | POIDS KG | T.CH. C | T.AMB C | CO2 % | CO % | O2 % |
|---|---|---|---|---|---|---|
| 2.3 | 15.87 | 147.6 | 24.5 | 14.70 | 4.38 | 4.91 |
| 6.7 | 15.35 | 124.9 | 24.4 | 15.61 | 4.46 | 4.06 |
| 7.3 | 15.24 | 123.0 | 24.5 | 16.13 | 4.50 | 3.72 |
| 9.2 | 15.02 | 119.2 | 24.4 | 15.99 | 4.33 | 3.58 |
| 12.3 | 14.61 | 114.4 | 24.4 | 15.69 | 4.30 | 3.95 |
| 15.4 | 14.23 | 112.4 | 24.4 | 15.98 | 5.36 | 3.62 |
| 18.6 | 13.77 | 113.0 | 24.7 | 15.14 | 4.03 | 4.26 |
| 21.7 | 13.44 | 112.8 | 24.8 | 14.35 | 3.21 | 5.08 |
| 26.7 | 13.04 | 106.4 | 24.7 | 8.34 | 2.09 | 11.46 |
| 38.0 | 12.63 | 81.7 | 24.6 | 6.87 | 1.14 | 13.15 |
| 51.1 | 12.21 | 83.4 | 24.7 | 7.37 | .88 | 13.05 |
| 63.9 | 11.76 | 88.7 | 24.8 | 8.29 | 1.33 | 11.96 |
| 73.3 | 11.38 | 91.0 | 24.8 | 8.51 | 1.63 | 11.33 |
| 82.1 | 11.00 | 90.3 | 24.7 | 8.34 | 1.67 | 11.79 |
| 93.3 | 10.57 | 87.2 | 24.6 | 7.96 | 1.69 | 12.14 |
| 104.0 | 10.18 | 83.9 | 24.7 | 7.50 | 1.65 | 12.73 |
| 117.1 | 9.77 | 80.2 | 24.8 | 7.12 | 1.68 | 12.96 |
| 130.5 | 9.34 | 77.8 | 24.7 | 7.25 | 1.77 | 12.77 |
| 143.7 | 8.95 | 76.0 | 24.8 | 6.62 | 2.03 | 13.49 |
| 157.5 | 8.56 | 74.0 | 24.8 | 6.70 | 1.99 | 13.22 |
| 173.8 | 8.09 | 71.5 | 24.8 | 6.50 | 2.17 | 13.34 |
| 183.5 | 7.74 | 75.7 | 24.7 | 6.95 | 2.03 | 12.71 |
| 198.6 | 7.33 | 76.2 | 24.2 | 7.13 | 1.91 | 12.99 |
| 212.4 | 6.92 | 76.6 | 23.1 | 7.45 | 2.14 | 12.52 |
| 225.6 | 6.51 | 75.2 | 23.1 | 6.90 | 2.44 | 12.99 |
| 242.8 | 6.11 | 73.1 | 22.3 | 7.06 | 2.06 | 12.54 |
| 259.7 | 5.67 | 75.4 | 24.5 | 7.29 | 2.10 | 12.38 |
| 277.9 | 5.27 | 69.1 | 24.5 | 5.53 | 3.76 | 13.23 |
| 296.8 | 4.87 | 71.0 | 24.5 | 7.23 | 2.00 | 12.31 |
| 317.1 | 4.48 | 71.9 | 24.5 | 7.08 | 2.26 | 12.40 |
| 336.6 | 4.07 | 71.5 | 24.8 | 9.96 | 2.13 | 9.65 |
| 349.8 | 3.64 | 77.5 | 25.0 | 10.21 | 2.10 | 9.01 |
| 364.5 | 3.26 | 77.4 | 25.1 | 9.02 | 1.86 | 10.38 |
| 385.2 | 2.82 | 76.7 | 25.1 | 8.95 | 1.52 | 10.28 |
| 405.9 | 2.44 | 74.8 | 25.2 | 9.35 | 1.98 | 9.91 |
| 431.3 | 2.00 | 74.3 | 25.2 | 7.97 | 2.09 | 10.99 |
| 456.4 | 1.63 | 68.6 | 25.2 | 7.33 | 2.32 | 11.66 |
| 474.0 | 1.21 | 80.8 | 25.2 | 9.33 | 1.13 | 10.43 |
| 501.2 | .80 | 66.2 | 25.2 | 6.83 | 1.33 | 12.87 |
| 551.1 | .38 | 52.3 | 25.2 | 4.62 | 1.72 | 15.27 |

RESULTATS (AVEC HC<0 CONSERVE)

TITRE: 0 POWER-2-3
FICHIER: 311012

| TEMPS MIN. | P.INI KG | P.FIN KG | INPUT MJ | OUTPUT MJ | CO gr | HC gr |
|---|---|---|---|---|---|---|
| 2.3 | 13.86 | 13.39 | 5.84 | .78 | 60 | 39 |
| 6.7 | 13.39 | 13.18 | 2.79 | .47 | 87 | 59 |
| 7.3 | 13.18 | 13.06 | 1.50 | .25 | 101 | 70 |
| 9.2 | 13.06 | 12.84 | 2.93 | .58 | 129 | 92 |
| 12.3 | 12.84 | 12.56 | 3.81 | .78 | 165 | 121 |
| 15.4 | 12.56 | 12.25 | 4.25 | .72 | 211 | 158 |
| 18.6 | 12.25 | 11.95 | 4.15 | 1.03 | 249 | 190 |
| 21.7 | 11.95 | 11.68 | 3.92 | 1.17 | 282 | 218 |
| 26.7 | 11.68 | 11.37 | 4.46 | 1.37 | 323 | 248 |
| 38.0 | 11.37 | 11.05 | 4.74 | 1.99 | 356 | 274 |
| 51.1 | 11.05 | 10.71 | 5.16 | 2.06 | 382 | 306 |
| 63.9 | 10.71 | 10.38 | 5.02 | 1.92 | 414 | 340 |
| 73.3 | 10.38 | 10.07 | 4.72 | 1.99 | 449 | 367 |
| 82.1 | 10.07 | 9.74 | 5.17 | 1.99 | 489 | 402 |
| 93.3 | 9.74 | 9.40 | 5.30 | 2.13 | 531 | 436 |
| 104.0 | 9.40 | 9.07 | 5.33 | 2.13 | 574 | 471 |
| 117.1 | 9.07 | 8.71 | 5.79 | 2.52 | 625 | 505 |
| 130.5 | 8.71 | 8.36 | 5.78 | 2.66 | 677 | 536 |
| 143.7 | 8.36 | 8.03 | 5.59 | 2.35 | 736 | 571 |
| 157.5 | 8.03 | 7.66 | 6.28 | 3.01 | 803 | 602 |
| 173.8 | 7.66 | 7.31 | 6.12 | 3.02 | 875 | 631 |
| 183.5 | 7.31 | 6.97 | 5.89 | 3.36 | 940 | 651 |
| 198.6 | 6.97 | 6.61 | 6.50 | 3.47 | 1004 | 680 |
| 212.4 | 6.61 | 6.24 | 6.67 | 3.71 | 1075 | 706 |
| 225.6 | 6.24 | 5.88 | 6.84 | 3.71 | 1160 | 734 |
| 242.8 | 5.88 | 5.50 | 7.23 | 4.83 | 1244 | 746 |
| 259.7 | 5.50 | 5.13 | 7.47 | 5.03 | 1331 | 760 |
| 277.9 | 5.13 | 4.76 | 7.46 | 4.38 | 1487 | 773 |
| 296.8 | 4.76 | 4.40 | 7.63 | 5.76 | 1577 | 776 |
| 317.1 | 4.40 | 4.03 | 7.96 | 5.87 | 1682 | 781 |
| 336.6 | 4.03 | 3.64 | 8.72 | 6.82 | 1766 | 787 |
| 349.8 | 3.64 | 3.26 | 8.81 | 7.57 | 1854 | 779 |
| 364.5 | 3.26 | 2.88 | 9.29 | 8.09 | 1948 | 769 |
| 385.2 | 2.88 | 2.50 | 9.73 | 9.52 | 2038 | 739 |
| 405.9 | 2.50 | 2.11 | 10.23 | 9.16 | 2148 | 725 |
| 431.3 | 2.11 | 1.73 | 10.64 | 10.01 | 2291 | 694 |
| 456.4 | 1.73 | 1.36 | 10.76 | 9.62 | 2457 | 671 |
| 474.0 | 1.36 | .96 | 11.97 | 11.38 | 2540 | 652 |
| 501.2 | .96 | .57 | 12.68 | 11.82 | 2676 | 629 |
| 551.1 | .57 | 0.00 | 19.22 | 14.44 | 2999 | 644 |

RESULTATS (AVEC HC<0 CONSERVE)

FICHIER: 311012 0 POWER-2-3
NOMBRE DE POINTS DE MESURE= 40

MESURES DE CHEMINEE (100% CHARGE BRULEE)

POIDS SEC= 13.9 KG
DUREE =560 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
2999 grammes
17.3 g/MJ
321 g/Hre
HYDROCARBURES :
644 grammes
3.7 g/MJ
69 g/Hre

INPUT : 274 MJ

OUTPUT : 173 MJ

PUISSANCE: 19 MJ/Hre

RENDEMENT:63.2 %

MESURES DE CHEMINEE (90.2% CHARGE BRULEE)

POIDS SEC= 12.5 KG
DUREE =465 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
2457 grammes
18.1 g/MJ
317 g/Hre
HYDROCARBURES :
671 grammes
4.9 g/MJ
87 g/Hre

INPUT : 230 MJ

OUTPUT : 136 MJ

PUISSANCE: 18 MJ/Hre

RENDEMENT:58.9 %

MESURES AU PLENUM

| | | |
|---|---|---|
| FRACTION BRULEE | 95.9 % | 90.2 % |
| DUREE | 526 MIN | 465 MIN |
| DELTA T MOYEN | 9 C | 9 C |
| INPUT | 255 MJ | 230 MJ |
| OUTPUT | 204 MJ | 183 MJ |
| PUISSANCE: | 23 MJ/H | 24 MJ/H |
| RENDEMENT | 80 % | 79 % |

RESULTATS (AVEC HC<0 ELIMINE)

TITRE: 0 POWER-2-3
FICHIER: 311012

| TEMPS MIN. | P.INI KG | P.FIN KG | INPUT MJ | OUTPUT MJ | CO gr | HC gr |
|---|---|---|---|---|---|---|
| 2.3 | 13.86 | 13.39 | 5.84 | .78 | 60 | 39 |
| 6.7 | 13.39 | 13.18 | 2.79 | .47 | 87 | 59 |
| 7.3 | 13.18 | 13.06 | 1.50 | .25 | 101 | 70 |
| 9.2 | 13.06 | 12.84 | 2.93 | .58 | 129 | 92 |
| 12.3 | 12.84 | 12.56 | 3.81 | .78 | 165 | 121 |
| 15.4 | 12.56 | 12.25 | 4.25 | .72 | 211 | 158 |
| 18.6 | 12.25 | 11.95 | 4.15 | 1.03 | 249 | 190 |
| 21.7 | 11.95 | 11.68 | 3.92 | 1.17 | 282 | 218 |
| 26.7 | 11.68 | 11.37 | 4.46 | 1.37 | 323 | 248 |
| 38.0 | 11.37 | 11.05 | 4.74 | 1.99 | 356 | 274 |
| 51.1 | 11.05 | 10.71 | 5.16 | 2.06 | 382 | 306 |
| 63.9 | 10.71 | 10.38 | 5.02 | 1.92 | 414 | 340 |
| 73.3 | 10.38 | 10.07 | 4.72 | 1.99 | 449 | 367 |
| 82.1 | 10.07 | 9.74 | 5.17 | 1.99 | 489 | 402 |
| 93.3 | 9.74 | 9.40 | 5.30 | 2.13 | 531 | 436 |
| 104.0 | 9.40 | 9.07 | 5.33 | 2.13 | 574 | 471 |
| 117.1 | 9.07 | 8.71 | 5.79 | 2.52 | 625 | 505 |
| 130.5 | 8.71 | 8.36 | 5.78 | 2.66 | 677 | 536 |
| 143.7 | 8.36 | 8.03 | 5.59 | 2.35 | 736 | 571 |
| 157.5 | 8.03 | 7.66 | 6.28 | 3.01 | 803 | 602 |
| 173.8 | 7.66 | 7.31 | 6.12 | 3.02 | 875 | 631 |
| 183.5 | 7.31 | 6.97 | 5.89 | 3.36 | 940 | 651 |
| 198.6 | 6.97 | 6.61 | 6.50 | 3.47 | 1004 | 680 |
| 212.4 | 6.61 | 6.24 | 6.67 | 3.71 | 1075 | 706 |
| 225.6 | 6.24 | 5.88 | 6.84 | 3.71 | 1160 | 734 |
| 242.8 | 5.88 | 5.50 | 7.23 | 4.83 | 1244 | 746 |
| 259.7 | 5.50 | 5.13 | 7.47 | 5.03 | 1331 | 760 |
| 277.9 | 5.13 | 4.76 | 7.46 | 4.38 | 1487 | 773 |
| 296.8 | 4.76 | 4.40 | 7.63 | 5.76 | 1577 | 776 |
| 317.1 | 4.40 | 4.03 | 7.96 | 5.87 | 1682 | 781 |
| 336.6 | 4.03 | 3.64 | 8.72 | 6.82 | 1766 | 787 |
| 349.8 | 3.64 | 3.26 | 8.81 | 7.13 | 1854 | 787 |
| 364.5 | 3.26 | 2.88 | 9.29 | 7.52 | 1948 | 787 |
| 385.2 | 2.88 | 2.50 | 9.73 | 7.89 | 2038 | 787 |
| 405.9 | 2.50 | 2.11 | 10.23 | 8.34 | 2148 | 787 |
| 431.3 | 2.11 | 1.73 | 10.64 | 8.31 | 2291 | 787 |
| 456.4 | 1.73 | 1.36 | 10.76 | 8.32 | 2457 | 787 |
| 474.0 | 1.36 | .96 | 11.97 | 10.33 | 2540 | 787 |
| 501.2 | .96 | .57 | 12.68 | 10.52 | 2676 | 787 |
| 551.1 | .57 | 0.00 | 19.22 | 14.44 | 2999 | 802 |

RESULTATS (AVEC HC<0 ELIMINE)

FICHIER: 311012 0 POWER-2-3
NOMBRE DE POINTS DE MESURE= 40

MESURES DE CHEMINEE (100% CHARGE BRULEE)

POIDS SEC= 13.9 KG
DUREE =560 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
2999 grammes
18.2 g/MJ
321 g/Hre

HYDROCARBURES :
802 grammes
4.9 g/MJ
86 g/Hre

INPUT : 274 MJ

OUTPUT : 165 MJ

PUISSANCE: 18 MJ/Hre

RENDEMENT:60.0 %

MESURES DE CHEMINEE (90.2% CHARGE BRULEE)

POIDS SEC= 12.5 KG
DUREE =465 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
2457 grammes
19.0 g/MJ
317 g/Hre

HYDROCARBURES :
787 grammes
6.1 g/MJ
101 g/Hre

INPUT : 230 MJ

OUTPUT : 129 MJ

PUISSANCE: 17 MJ/Hre

RENDEMENT:56.1 %

MESURES AU PLENUM

| | | |
|---|---|---|
| FRACTION BRULEE | 95.9 % | 90.2 % |
| DUREE | 526 MIN | 465 MIN |
| DELTA T MOYEN | 9 C | 9 C |
| INPUT | 255 MJ | 230 MJ |
| OUTPUT | 204 MJ | 183 MJ |
| PUISSANCE: | 23 MJ/H | 24 MJ/H |
| RENDEMENT | 80 % | 79 % |

# MESURES

FICHIER: 011111
TITRE: 0-POWER-4-3
POIDS INITIAL (BASE HUMIDE)=20.24KG
HUMIDITE DU BOIS=15%
POIDS INTIAL (BASE SECHE)17.21KG
INTERVALLE DE LECTURE (%) 2.5
NBRE. DE LECTURES AU CHANGEMENT D'ETAT 1

| TEMPS MIN. | POIDS KG | T.CH. C | T.AMB C | CO2 % | CO % | O2 % |
|---|---|---|---|---|---|---|
| 2.3 | 19.72 | 158.7 | 24.0 | 15.70 | 4.83 | 3.08 |
| 4.2 | 19.16 | 190.3 | 24.1 | 16.23 | 5.70 | 2.48 |
| 5.4 | 18.72 | 202.5 | 24.1 | 16.50 | 6.46 | 2.17 |
| 6.7 | 18.41 | 200.1 | 24.1 | 14.74 | 2.37 | 4.94 |
| 8.5 | 18.18 | 174.8 | 24.1 | 14.22 | 2.11 | 5.62 |
| 13.6 | 17.68 | 147.0 | 24.2 | 14.84 | 2.06 | 5.18 |
| 18.6 | 17.19 | 138.5 | 22.7 | 14.69 | 1.96 | 5.47 |
| 23.6 | 16.70 | 136.0 | 21.4 | 15.11 | 2.21 | 5.03 |
| 28.6 | 16.17 | 137.1 | 21.2 | 15.26 | 2.46 | 4.72 |
| 33.6 | 15.59 | 138.0 | 21.0 | 15.29 | 2.72 | 4.64 |
| 38.0 | 15.17 | 138.2 | 20.3 | 15.34 | 2.91 | 4.45 |
| 42.4 | 14.65 | 136.6 | 20.4 | 16.22 | 6.00 | 3.46 |
| 45.5 | 14.07 | 131.0 | 21.0 | 16.91 | 7.32 | 2.82 |
| 48.0 | 13.55 | 128.2 | 22.3 | 16.89 | 6.45 | 2.85 |
| 50.5 | 13.08 | 128.8 | 22.8 | 16.18 | 4.08 | 3.65 |
| 53.7 | 12.60 | 128.1 | 23.1 | 14.63 | 3.05 | 4.86 |
| 58.0 | 12.10 | 122.4 | 23.6 | 12.54 | 2.44 | 7.05 |
| 64.6 | 11.59 | 112.3 | 23.9 | 11.64 | 2.18 | 7.90 |
| 70.8 | 11.09 | 112.1 | 24.1 | 11.91 | 2.12 | 7.41 |
| 77.7 | 10.59 | 111.9 | 24.1 | 12.10 | 2.20 | 7.22 |
| 84.6 | 10.07 | 110.9 | 24.1 | 11.41 | 1.80 | 8.24 |
| 92.7 | 9.61 | 103.4 | 24.1 | 9.13 | 1.77 | 10.64 |
| 105.9 | 9.07 | 82.7 | 24.0 | 7.47 | 2.30 | 11.95 |
| 118.4 | 8.59 | 79.4 | 24.0 | 7.71 | 2.28 | 12.08 |
| 131.2 | 8.09 | 76.9 | 24.1 | 7.26 | 2.50 | 12.39 |
| 147.6 | 7.58 | 69.5 | 24.1 | 6.10 | 2.59 | 13.31 |
| 162.0 | 7.05 | 72.0 | 24.4 | 6.54 | 4.84 | 12.28 |
| 175.3 | 6.56 | 72.7 | 24.5 | 6.14 | 4.35 | 12.60 |
| 192.5 | 6.04 | 69.2 | 24.5 | 6.31 | 4.16 | 12.48 |
| 211.3 | 5.56 | 66.4 | 24.6 | 6.05 | 3.78 | 12.73 |
| 234.0 | 5.04 | 63.9 | 24.6 | 6.32 | 3.68 | 12.34 |
| 260.6 | 4.54 | 61.9 | 24.4 | 6.13 | 3.61 | 12.43 |
| 290.8 | 4.04 | 68.9 | 24.6 | 7.65 | 1.72 | 11.75 |
| 323.7 | 3.54 | 65.1 | 24.6 | 7.03 | 2.00 | 12.26 |
| 366.7 | 3.02 | 62.4 | 24.9 | 7.32 | 1.98 | 12.61 |
| 408.8 | 2.51 | 61.8 | 24.5 | 8.07 | 1.97 | 11.32 |
| 437.3 | 2.00 | 65.4 | 24.5 | 7.87 | 1.71 | 11.75 |
| 465.6 | 1.52 | 64.9 | 24.6 | 7.28 | 1.94 | 12.19 |
| 511.7 | 1.01 | 57.5 | 24.6 | 5.66 | 1.80 | 13.84 |
| 564.2 | .50 | 48.9 | 24.6 | 4.40 | 1.68 | 15.65 |

RESULTATS (AVEC HC<0 CONSERVE)

TITRE: 0-POWER-4-3
FICHIER: 011111

| TEMPS MIN. | P.INI KG | P.FIN KG | INPUT MJ | OUTPUT MJ | CO gr | HC gr |
|---|---|---|---|---|---|---|
| 2.3 | 17.21 | 16.67 | 6.70 | 1.14 | 73 | 38 |
| 4.2 | 16.67 | 16.33 | 4.44 | .63 | 125 | 67 |
| 5.4 | 16.33 | 16.06 | 3.45 | .42 | 168 | 93 |
| 6.7 | 16.06 | 15.87 | 2.57 | .69 | 184 | 108 |
| 8.5 | 15.87 | 15.61 | 3.53 | 1.01 | 206 | 130 |
| 13.6 | 15.61 | 15.25 | 4.98 | 1.50 | 234 | 163 |
| 18.6 | 15.25 | 14.88 | 5.12 | 1.57 | 261 | 198 |
| 23.6 | 14.88 | 14.50 | 5.46 | 1.65 | 293 | 238 |
| 28.6 | 14.50 | 14.08 | 6.15 | 1.90 | 331 | 283 |
| 33.6 | 14.08 | 13.69 | 5.72 | 1.77 | 370 | 327 |
| 38.0 | 13.69 | 13.32 | 5.54 | 1.76 | 410 | 368 |
| 42.4 | 13.32 | 12.88 | 6.65 | 1.30 | 483 | 431 |
| 45.5 | 12.88 | 12.44 | 6.87 | 1.20 | 566 | 500 |
| 48.0 | 12.44 | 12.03 | 6.33 | 1.40 | 637 | 560 |
| 50.5 | 12.03 | 11.64 | 6.18 | 2.00 | 690 | 609 |
| 53.7 | 11.64 | 11.23 | 6.54 | 2.70 | 741 | 650 |
| 58.0 | 11.23 | 10.81 | 6.90 | 3.14 | 793 | 689 |
| 64.6 | 10.81 | 10.38 | 7.12 | 3.58 | 847 | 723 |
| 70.8 | 10.38 | 9.95 | 7.20 | 4.03 | 900 | 750 |
| 77.7 | 9.95 | 9.51 | 7.45 | 4.28 | 956 | 777 |
| 84.6 | 9.51 | 9.08 | 7.38 | 4.41 | 1005 | 802 |
| 92.7 | 9.08 | 8.64 | 7.75 | 4.61 | 1067 | 827 |
| 105.9 | 8.64 | 8.19 | 8.11 | 4.87 | 1163 | 849 |
| 118.4 | 8.19 | 7.75 | 8.00 | 4.57 | 1251 | 877 |
| 131.2 | 7.75 | 7.30 | 8.43 | 4.88 | 1356 | 905 |
| 147.6 | 7.30 | 6.84 | 8.94 | 5.45 | 1491 | 925 |
| 162.0 | 6.84 | 6.37 | 9.18 | 4.36 | 1676 | 964 |
| 175.3 | 6.37 | 5.91 | 9.44 | 5.06 | 1871 | 992 |
| 192.5 | 5.91 | 5.45 | 9.61 | 5.49 | 2065 | 1016 |
| 211.3 | 5.45 | 4.99 | 9.97 | 6.25 | 2269 | 1030 |
| 234.0 | 4.99 | 4.52 | 10.55 | 7.18 | 2483 | 1036 |
| 260.6 | 4.52 | 4.06 | 10.78 | 7.70 | 2711 | 1034 |
| 290.8 | 4.06 | 3.59 | 11.35 | 10.19 | 2837 | 1013 |
| 323.7 | 3.59 | 3.12 | 12.05 | 10.51 | 3000 | 993 |
| 366.7 | 3.12 | 2.63 | 12.79 | 9.62 | 3154 | 1010 |
| 408.8 | 2.63 | 2.15 | 13.35 | 11.70 | 3315 | 995 |
| 437.3 | 2.15 | 1.68 | 13.70 | 11.97 | 3467 | 984 |
| 465.6 | 1.68 | 1.21 | 14.40 | 12.36 | 3658 | 971 |
| 511.7 | 1.21 | .72 | 15.56 | 13.57 | 3902 | 947 |
| 564.2 | .72 | 0.00 | 24.30 | 17.17 | 4307 | 991 |

RESULTATS (AVEC HC<0 CONSERVE)

FICHIER: 011111 0-POWER-4-3
NOMBRE DE POINTS DE MESURE= 40

MESURES DE CHEMINEE (100% CHARGE BRULEE)

POIDS SEC= 17.2 KG
DUREE =600 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
4307 grammes
21.6 g/MJ
431 g/Hre
HYDROCARBURES :
991 grammes
5.0 g/MJ
99 g/Hre

INPUT : 341 MJ

OUTPUT : 200 MJ

PUISSANCE: 20 MJ/Hre

RENDEMENT:58.6 %

MESURES DE CHEMINEE (90.2% CHARGE BRULEE)

POIDS SEC= 15.5 KG
DUREE =451 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
3467 grammes
22.2 g/MJ
461 g/Hre
HYDROCARBURES :
984 grammes
6.3 g/MJ
131 g/Hre

INPUT : 286 MJ

OUTPUT : 156 MJ

PUISSANCE: 21 MJ/Hre

RENDEMENT:54.7 %

MESURES AU PLENUM

| | | |
|---|---|---|
| FRACTION BRULEE | 95.8 % | 90.2 % |
| DUREE | 538 MIN | 451 MIN |
| DELTA T MOYEN | 10 C | 10 C |
| INPUT | 316 MJ | 286 MJ |
| OUTPUT | 218 MJ | 196 MJ |
| PUISSANCE: | 24 MJ/H | 26 MJ/H |
| RENDEMENT | 69 % | 68 % |

RESULTATS (AVEC HC<0 ELIMINE)

TITRE: 0-POWER-4-3
FICHIER: 011111

| TEMPS MIN. | P.INI KG | P.FIN KG | INPUT MJ | OUTPUT MJ | CO gr | HC gr |
|---|---|---|---|---|---|---|
| 2.3 | 17.21 | 16.67 | 6.70 | 1.14 | 73 | 38 |
| 4.2 | 16.67 | 16.33 | 4.44 | .63 | 125 | 67 |
| 5.4 | 16.33 | 16.06 | 3.45 | .42 | 168 | 93 |
| 6.7 | 16.06 | 15.87 | 2.57 | .69 | 184 | 108 |
| 8.5 | 15.87 | 15.61 | 3.53 | 1.01 | 206 | 130 |
| 13.6 | 15.61 | 15.25 | 4.98 | 1.50 | 234 | 163 |
| 18.6 | 15.25 | 14.88 | 5.12 | 1.57 | 261 | 198 |
| 23.6 | 14.88 | 14.50 | 5.46 | 1.65 | 293 | 238 |
| 28.6 | 14.50 | 14.08 | 6.15 | 1.90 | 331 | 283 |
| 33.6 | 14.08 | 13.69 | 5.72 | 1.77 | 370 | 327 |
| 38.0 | 13.69 | 13.32 | 5.54 | 1.76 | 410 | 368 |
| 42.4 | 13.32 | 12.88 | 6.65 | 1.30 | 483 | 431 |
| 45.5 | 12.88 | 12.44 | 6.87 | 1.20 | 566 | 500 |
| 48.0 | 12.44 | 12.03 | 6.33 | 1.40 | 637 | 560 |
| 50.5 | 12.03 | 11.64 | 6.18 | 2.00 | 690 | 609 |
| 53.7 | 11.64 | 11.23 | 6.54 | 2.70 | 741 | 650 |
| 58.0 | 11.23 | 10.81 | 6.90 | 3.14 | 793 | 689 |
| 64.6 | 10.81 | 10.38 | 7.12 | 3.58 | 847 | 723 |
| 70.8 | 10.38 | 9.95 | 7.20 | 4.03 | 900 | 750 |
| 77.7 | 9.95 | 9.51 | 7.45 | 4.28 | 956 | 777 |
| 84.6 | 9.51 | 9.08 | 7.38 | 4.41 | 1005 | 802 |
| 92.7 | 9.08 | 8.64 | 7.75 | 4.61 | 1067 | 827 |
| 105.9 | 8.64 | 8.19 | 8.11 | 4.87 | 1163 | 849 |
| 118.4 | 8.19 | 7.75 | 8.00 | 4.57 | 1251 | 877 |
| 131.2 | 7.75 | 7.30 | 8.43 | 4.88 | 1356 | 905 |
| 147.6 | 7.30 | 6.84 | 8.94 | 5.45 | 1491 | 925 |
| 162.0 | 6.84 | 6.37 | 9.18 | 4.36 | 1676 | 964 |
| 175.3 | 6.37 | 5.91 | 9.44 | 5.06 | 1871 | 992 |
| 192.5 | 5.91 | 5.45 | 9.61 | 5.49 | 2065 | 1016 |
| 211.3 | 5.45 | 4.99 | 9.97 | 6.25 | 2269 | 1030 |
| 234.0 | 4.99 | 4.52 | 10.55 | 7.18 | 2483 | 1036 |
| 260.6 | 4.52 | 4.06 | 10.78 | 7.59 | 2711 | 1036 |
| 290.8 | 4.06 | 3.59 | 11.35 | 9.02 | 2837 | 1036 |
| 323.7 | 3.59 | 3.12 | 12.05 | 9.40 | 3000 | 1036 |
| 366.7 | 3.12 | 2.63 | 12.79 | 9.62 | 3154 | 1053 |
| 408.8 | 2.63 | 2.15 | 13.35 | 10.87 | 3315 | 1053 |
| 437.3 | 2.15 | 1.68 | 13.70 | 11.36 | 3467 | 1053 |
| 465.6 | 1.68 | 1.21 | 14.40 | 11.67 | 3658 | 1053 |
| 511.7 | 1.21 | .72 | 15.56 | 12.23 | 3902 | 1053 |
| 564.2 | .72 | 0.00 | 24.30 | 17.17 | 4307 | 1096 |

RESULTATS (AVEC HC<0 ELIMINE)

FICHIER: 011111 0-POWER-4-3
NOMBRE DE POINTS DE MESURE= 40

MESURES DE CHEMINEE (100% CHARGE BRULEE)

POIDS SEC= 17.2 KG
DUREE =600 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
4307 grammes
22.2 g/MJ
431 g/Hre
HYDROCARBURES :
1096 grammes
5.7 g/MJ
110 g/Hre

INPUT : 341 MJ

OUTPUT : 194 MJ

PUISSANCE: 19 MJ/Hre

RENDEMENT:56.9 %

MESURES DE CHEMINEE (90.2% CHARGE BRULEE)

POIDS SEC= 15.5 KG
DUREE =451 MIN.

EMISSIONS:
MONOXYDE DE CARBONE:
3467 grammes
22.7 g/MJ
461 g/Hre
HYDROCARBURES :
1053 grammes
6.9 g/MJ
140 g/Hre

INPUT : 286 MJ

OUTPUT : 153 MJ

PUISSANCE: 20 MJ/Hre

RENDEMENT:53.3 %

MESURES AU PLENUM

| | | |
|---|---|---|
| FRACTION BRULEE | 95.8 % | 90.2 % |
| DUREE | 538 MIN | 451 MIN |
| DELTA T MOYEN | 10 C | 10 C |
| INPUT | 316 MJ | 286 MJ |
| OUTPUT | 218 MJ | 196 MJ |
| PUISSANCE: | 24 MJ/H | 26 MJ/H |
| RENDEMENT | 69 % | 68 % |